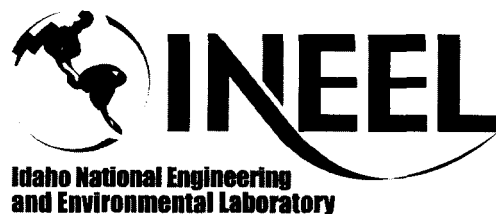


Engineering Design File

PROJECT FILE NO. 021052

Applicable or Relevant and Appropriate Requirements Implementation Matrix for the OU 7-10 Glovebox Excavator Method Project (Draft)

Prepared for:
U.S. Department of Energy
Idaho Operations Office
Idaho Falls, Idaho



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ACRONYMS

AMWTP	Advanced Mixed Waste Treatment Project
ANSI	American National Standards Institute
AOC	area of contamination
ARAR	applicable or relevant and appropriate requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
D&D&D	deactivation, decontamination, and decommissioning
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
DOT	U.S. Department of Transportation
EDF	Engineering Design File
EPA	U.S. Environmental Protection Agency
ESD	explanation of significant differences
HEPA	high-efficiency particulate air
HWMA	Hazardous Waste Management Act
IDAPA	Idaho Administrative Procedures Act
INEEL	Idaho National Engineering and Environmental Laboratory
LDR	land disposal restriction
MCP	management control procedure
NESHAP	National Emission Standards for Hazardous Air Pollutants
NA	not applicable
OSWER	Office of Solid Waste and Emergency Response
OU	operable unit
PCB	polychlorinated biphenyl
PGS	Packaging Glovebox System

RCRA	Resource Conservation and Recovery Act
RD/RA	remedial design/remedial action
ROD	Record of Decision
RRWAC	INEEL reusable property, recyclable materials, and waste acceptance criteria
RWMC	Radioactive Waste Management Complex
SDA	Subsurface Disposal Area
TAP	toxic air pollutant
TBC	to be considered
TSA	Transuranic Storage Area
TSCA	Toxic Substances Control Act
WAC	waste acceptance criteria
WAG	waste area group
WGS	Waste Generator Services
WIPP	Waste Isolation Pilot Plant

Applicable or Relevant and Appropriate Requirements Implementation Matrix for the OU 7-10 Glovebox Excavator Method Project (Draft)

1. INTRODUCTION AND PURPOSE

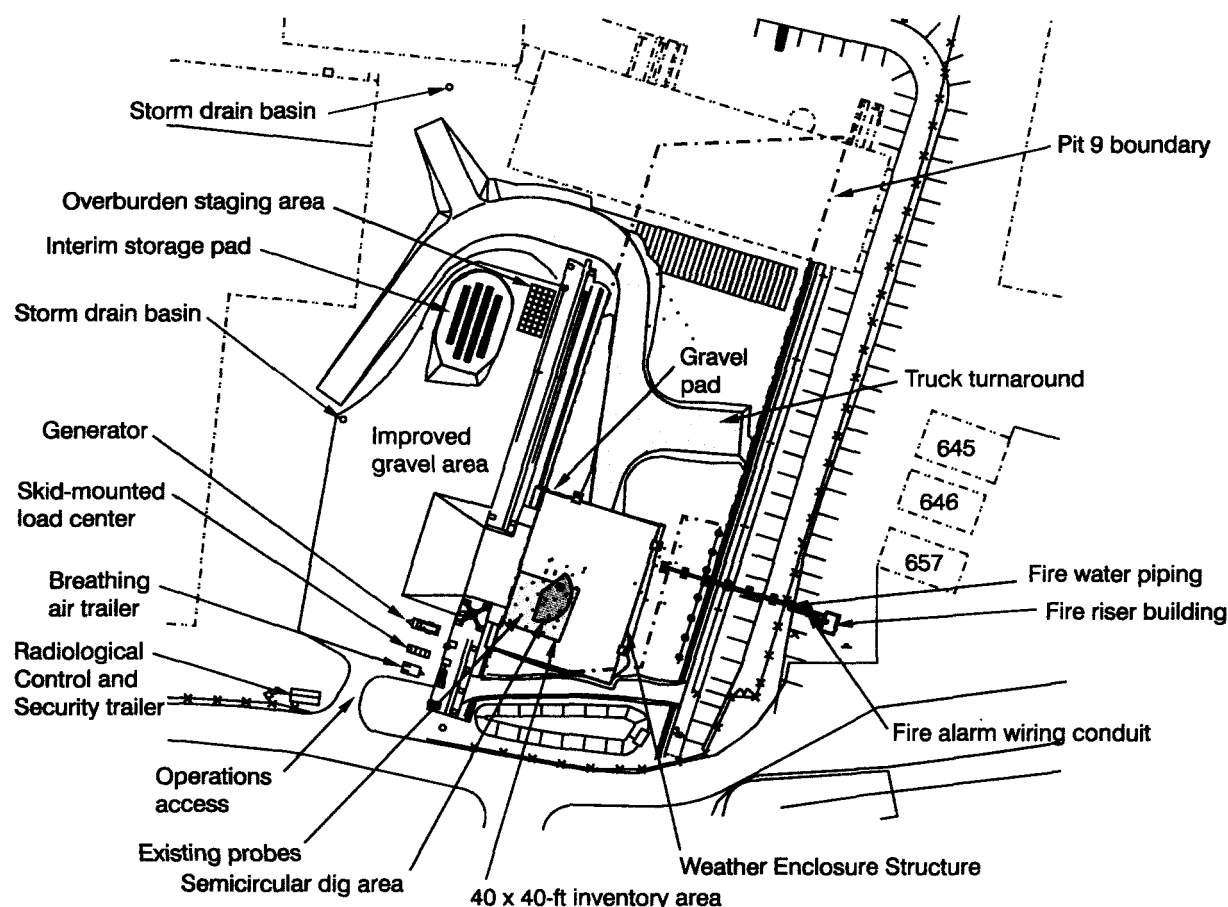
This Engineering Design File (EDF) documents the applicable or relevant and appropriate requirements (ARARs) for the Operable Unit (OU) 7-10 Glovebox Excavator Method Project. This project has been developed by the U.S. Department of Energy Idaho Operations Office (DOE-ID) to demonstrate retrieval of transuranic waste from a selected area of OU 7-10 (Pit 9) at the Idaho National Engineering and Environmental Laboratory (INEEL) Radioactive Waste Management Complex (RWMC) (see Figure 1 showing the site location). The DOE-ID developed the project in consultation with the U.S. Environmental Protection Agency (EPA) Region 10 and the Idaho Department of Environmental Quality. The OU 7-10 Glovebox Excavator Method Project is a modification of Stage II of the OU 7-10 interim action, as defined in the *Record of Decision: Declaration of Pit 9 at the Radioactive Waste Management Complex Subsurface Disposal Area at the Idaho National Engineering Laboratory, Idaho Falls, Idaho* (DOE-ID 1993) and the 1998 *Explanation of Significant Differences for the Pit 9 Interim Action Record of Decision at the Radioactive Waste Management Complex at the Idaho National Engineering and Environmental Laboratory* (DOE-ID 1998).

The entire interim action project has three stages, as defined by the 1998 *Explanation of Significant Differences* (ESD) (DOE-ID 1998) and as briefly described below.

- **Stage I**—involved installation of probe casings for the collection of nonintrusive characterization information. Stages I and II are intended to obtain characterization and other information needed for assessment of the radioactive and hazardous waste disposed of in the Subsurface Disposal Area (SDA).
- **Stage II**—currently referred to as the OU 7-10 Glovebox Excavator Method Project, includes limited retrieval and excavation in a selected area of OU 7-10.
- **Stage III**—a full-scale remediation of Pit 9. The scope and planning for Stage III are dependent upon completion of Stage II. Thus, the schedule and implementation details for Stage III are not defined at this time.

In June 2000, the “Draft Operable Unit 7-10 (OU 7-10) Staged Interim Action Project, Stage II, RD/RA Work Plan Primary Deliverable Submittal” (DOE-ID 2000) was submitted for agency review. Schedule considerations associated with that document led to a modified approach for Stage II, as described in *Waste Area Group 7 Analysis of OU 7-10 Stage II Modifications* (INEEL 2001) and as documented in the *OU 7-10 Glovebox Excavator Method Project Conceptual Design Report for Critical Decision 1* (INEEL 2002a).

The OU 7-10 project ARARs are documented in the OU 7-10 Record of Decision (ROD) (DOE-ID 1993) and the subsequent 1998 ESD (DOE-ID 1998). The ROD was prepared specifically to document the full-scale remediation of Pit 9 (i.e., Stage III as defined in the 1998 ESD). Consequently, the ROD identifies ARARs for activities that are not included as part of the OU 7-10 Glovebox Excavator Method Project, or Stage II, work scope. For example, the ROD identified ARARs from 40 *Code of Federal Regulations* (CFR) 264, Subpart O, “Incinerators.” The incinerator regulations of the Resource Conservation and Recovery Act (RCRA) were identified because the alternative scope for full-scale pit



02-GA50598-03

Figure 1. Plan view of the Operable Unit 7-10 area showing project site structures.

remediation included use of technology subject to RCRA incineration ARARs. Because the current project scope is limited to retrieval and repackaging activities, clarification is required regarding the actual subset of Pit 9 ROD ARARs that will require implementation. The purpose of this EDF is to provide that clarification and to document the ARARs that do require implementation for the OU 7-10 Glovebox Excavator Method Project.

1.1 Background

As presented in the ROD, Pit 9 was used for disposal of radioactive waste from November 8, 1967, to June 9, 1969. It was used to dispose of approximately 110,000 ft³ (3,115 m³) of transuranic waste (as defined in 1969, >10 nCi/g transuranic) from the Rocky Flats Plant and additional low-level waste (as defined in 1969, <10 nCi/g transuranic) from waste generators located at the INEEL, for a total estimated waste volume of 150,000 ft³ (4,248 m³). The estimated volume of overburden is approximately 250,000 ft³ (7,079 m³). The estimated volume of soil between and below the buried waste is approximately 350,000 ft³ (9,911 m³). Most of the transuranic waste consists of drums of sludges (contaminated with a mixture of transuranic waste and organic solvents), drums of assorted solid waste, and cardboard boxes containing empty, contaminated drums. The size of the project retrieval area (in the southern end of Pit 9) is defined by a fan-shaped area with a 20-ft (6-m) radius and the angular extent of 145 degrees. Existing information indicates that the waste located in the OU 7-10 Glovebox Excavator Method Project location originated at the Rocky Flats Plant.

The OU 7-10 Glovebox Excavator Method Project design allows all waste zone material retrieval, sampling, and packaging to be conducted inside a contaminant confinement structure by personnel outside the confinement. The confinement (with a filtered exhaust system) protects both workers and the public, and consists of a Weather Enclosure Structure enclosing the contaminant confinement structure (Retrieval Confinement Structure [RCS]). The Weather Enclosure Structure is anchored to a Facility Floor Structure, which supports the equipment. Waste is processed in the Packaging Glovebox System (PGS) (see Figure 2).

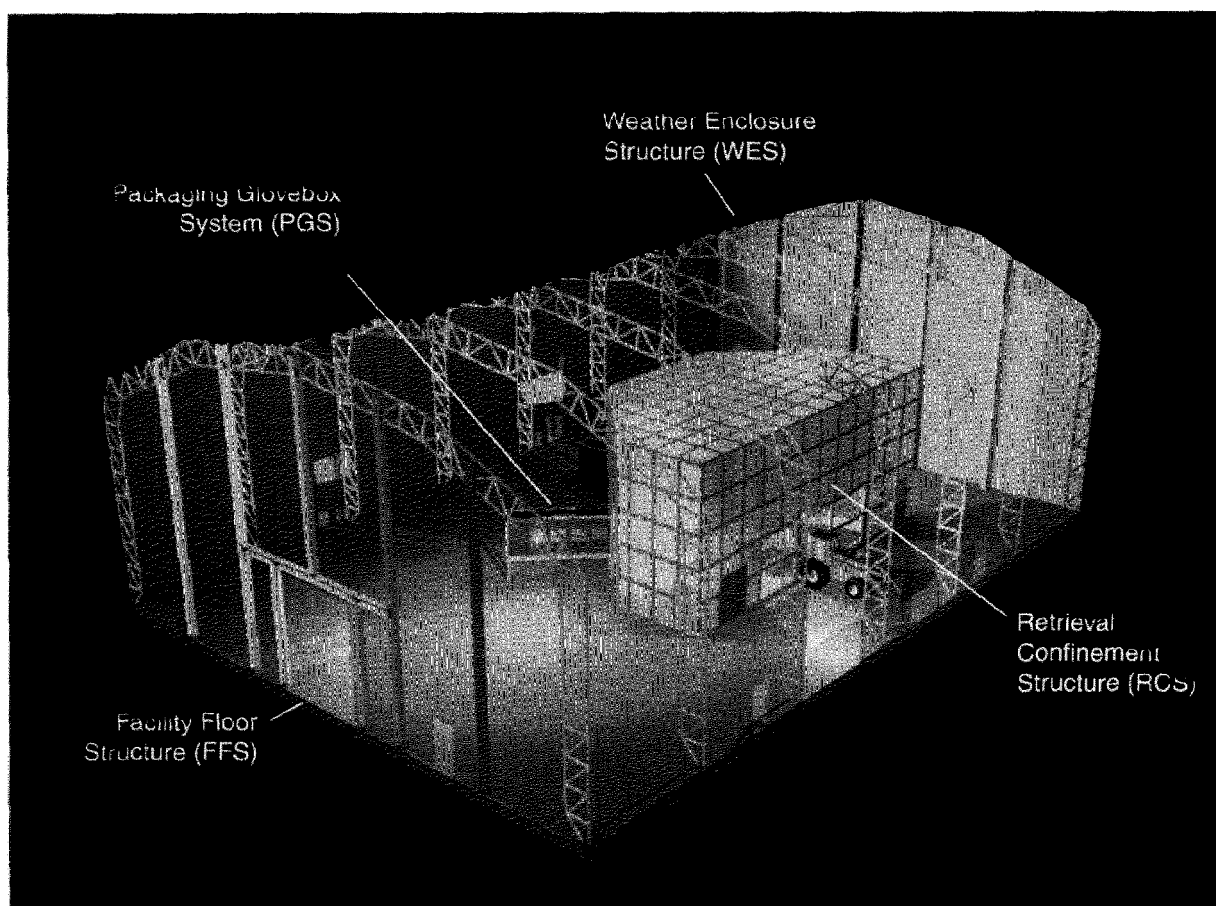


Figure 2. Operable Unit 7-10 Glovebox Excavator Method Project.

The key components of the design (excavator, confinement, and gloveboxes) use standard commercial products and fabrication techniques. For example, the excavator is a standard backhoe modified to seal to the confinement and equipped with enhanced television viewing. It is operated in the normal manner, but is modified to operate in a single, stationary position.

The primary waste stream generated through project activities will combine waste streams originally generated at the Rocky Flats Plant and subsequently disposed of in Pit 9 during 1968. This is because retrieval with the backhoe-type excavator will lead to some commingling of the buried wastes, and the original waste containers are assumed to have lost their integrity through long-term corrosion (i.e., "intact" drums of waste are not expected to be encountered during retrieval). The waste streams in the retrieval area consist of Rocky Flats Plant Series 74 sludges; graphite molds; combustible and noncombustible wastes; empty, contaminated drums; and interstitial soils.

The overall project scope includes design and construction, procurement, startup testing, inspection and readiness evaluation, excavation and retrieval, characterization, maintenance, and waste transfer to the Advanced Mixed Waste Treatment Project (AMWTP). Also included as part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) project work scope are postoperation activities including facility shutdown and deactivation, decontamination, and decommissioning (D&D&D). These postoperation work activities are also subject to the substantive requirements of ARARs as part of the CERCLA project work scope being conducted in agreement with the OU 7-10 ROD (DOE-ID 1993) and *Federal Facility Agreement and Consent Order for the Idaho National Engineering and Environmental Laboratory* (DOE-ID 1991).

2. APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS IDENTIFICATION FOR THE OU 7-10 GLOVEBOX EXCAVATOR METHOD PROJECT

This section defines the ARARs that require implementation for the OU 7-10 Glovebox Excavator Method Project. The remainder of Section 2 discusses a number of project-specific implementation details associated with the ARARs. The discussion presented in Section 2 focuses on implementation details that are considered important or unique to the project, is presented for clarification purposes, and is not all-inclusive. Appendix A is then used to document a detailed listing of the ARARs and to-be-considered (TBC) guidance and a summary of the associated implementation details. As noted, the ARARs documented in this EDF are a subset of the ARARs documented for OU 7-10 in the 1993 ROD (DOE-ID 1993). Only a subset of the original ARARs requires implementation due to the limited OU 7-10 Glovebox Excavator Method Project work scope. Furthermore, consistent with CERCLA, the project is only bound by the ARARs in effect at the time the ROD was issued or as subsequently formally modified by the CERCLA parties.

Appendix A identifies ARARs for all project phases (including D&D&D) and includes ARARs that would apply to a CERCLA storage scenario. The current project work planning has not been finalized for storage of materials following repackaging in the PGS. Two options are currently being evaluated including on-site CERCLA storage and storage in WMF-628, which is a RCRA/Hazardous Waste Management Act storage module located in the Transuranic Storage Area of the RWMC. Of course, if wastes are stored in WMF-628, all substantive and administrative permit requirements will apply to the waste while in permitted storage. The ARARs that will require implementation in a CERCLA storage scenario are identified in Appendix A and will apply to storage of waste zone materials and to storage of secondary and D&D&D waste streams. The project team anticipates that CERCLA storage will occur in the SDA next to the project site (see Figure 1); however, the storage location has not been finalized at this time.

The ARARs are based on the assumption that the waste zone materials require management as mixed waste based on the RCRA-listed and characteristic waste codes identified in the Pit 9 ROD (DOE-ID 1993) in addition to the radionuclide content. The polychlorinated biphenyl (PCB) concentration of some portion of the materials is assumed to be ≥ 50 ppm and is regulated by the Toxic Substances Control Act (TSCA).

NOTE: *The OU 7-10 Glovebox Excavator Method Project Storage Requirements and Approach (Burton 2002) also presents a limited number of requirements from the RCRA that are not specifically ARARs identified in the Pit 9 ROD, but will require implementation for the project because the requirements stem from INEEL internal procedures. The management control procedure-based requirements are not presented in Appendix A of this EDF, because the focus of the appendix is to present CERCLA ARARs.*

2.1 Resource Conservation and Recovery Act Applicable or Relevant and Appropriate Requirements

A number of project-specific clarifications are discussed in this section relevant to implementation of RCRA ARARs. The clarifications are presented to help project personnel understand requirement implementation details, responsibilities, and approaches.

2.1.1 Area of Contamination and Land Disposal Restrictions

The *Remedial Design/Remedial Action Scope of Work and Remedial Design Work Plan: Operable Unit 7-10 (Pit 9 Project Interim Action)* (LMITCO 1997) defines the area of contamination (AOC) for OU 7-10. The Remedial Design/Remedial Action (RD/RA) Scope of Work states, "...the AOC associated with Pit 9 extends at least 152 m (500 ft) from Pit 9 physical boundaries in areas exhibiting elevated levels of soil gas or subsurface soil contamination." The significance of the AOC designation relates primarily to the applicability of RCRA land disposal restrictions (LDRs) as ARARs for a CERCLA action. As stated in the RD/RA Scope of Work (LMITCO 1997),

For LDRs to be applicable to a CERCLA response, the action must constitute placement of a restricted hazardous waste. As discussed in the national contingency plan (40 CFR 300) placement does not occur when waste is left in place or moved within a single AOC. For example, placement occurs when waste is redeposited after treatment in a separate unit (e.g., incinerator or tank), or when waste is moved from one AOC to another (55 FR 8758, March 8, 1990).

Land disposal restriction applicability to project activities is simplified because the materials are ultimately planned for disposition at the Waste Isolation Pilot Plant (WIPP). The simplification is based on the fact that the *Waste Isolation Pilot Plant Land Withdrawal Act* (Public Law 102-579) exempted transuranic mixed waste designated for disposal at the WIPP from compliance with RCRA LDRs. Consequently, if the materials generated during the OU 7-10 Glovebox Excavator Method Project are certified for acceptance at the WIPP, the materials will not require treatment to LDR standards.

It should be noted that land disposal restrictions might apply to hazardous or mixed wastes that are not eligible for transfer to the WIPP. Secondary waste streams (e.g., that are not transuranic waste), such as those resulting from D&D&D activities, may be sent to disposal facilities located on the INEEL, such as the INEEL CERCLA Disposal Facility, in which case, the wastes will need to meet the facility waste acceptance criteria including any applicable LDR standards.

2.1.2 Resource Conservation and Recovery Act Storage Considerations

The use and management of containers (40 CFR 264 Subpart I) is the primary RCRA ARAR that applies to project storage. The requirements are presented in Appendix A. The containment requirements of 40 CFR 264.175 Subpart I provide separate storage approaches for waste that contains free liquids. A containment system must be used in the event that waste with free-liquid content is stored as defined in 40 CFR 264.175 Subpart I (b)(1)–(5). The containment system is not required for materials without free liquids. In this case, the requirement is as defined in 40 CFR 264.175 Subpart I (c)(1)(2). At a minimum, the containers must be elevated or otherwise protected from contact with accumulated liquid. Other requirements of Subpart I, including container management, condition, and inspection requirements, apply to the storage area to ensure protective storage.

2.1.2.1 Resource Conservation and Recovery Act Applicable or Relevant Requirements Implementation in the Packaging Glovebox System.

The PGS (see Figure 2) actually consists of three separate gloveboxes used to provide hands-on operator access to the wastes that are retrieved in the Retrieval Confinement Structure through the use of the backhoe. The backhoe places the wastes in a transfer cart, which is approximately 30 × 40 × 7 in. and constructed out of stainless steel. The waste transfer cart is fitted with a waste bag to receive the waste in the cart. Operators at the gloveboxes visually examine the wastes, collect samples for analysis, and perform fissile monitoring of certain combustible waste forms. Operators segregate combustibles and scrap metals into a separate waste

drum from the soil and sludge waste streams. Once the examination and segregation steps are performed, the wastes are loaded into a new drum by folding the waste bag, which is equipped with lifting rings, around the cart contents and lifting the waste bag out of the transfer cart through the use of a hoist. Operators may also directly place other waste items into the new drums through the use of the gloveport access. A standard double bagout transfer method is then used to package wastes in the new drums (INEEL 2002a).

An agreement reached during the initial Stage II efforts clarified the ARARs implementation for previous Material Handling Cell glovebox operations. Because of the similarity of the PGS operations and the previous Stage II Material Handling Cell operations, it is considered appropriate to follow the previous determination for the OU 7-10 Glovebox Excavator Method Project's PGS operations. The agreement reached previously was to apply select provisions of 40 CFR 264 Subpart I, "Use and Management of Containers," to the Integrated Transfer Module trays (i.e., the trays are viewed and managed as containers). The meeting minutes and ARARs alternatives summary (i.e., range of alternatives considered and discussed) are attached as Appendix B to this EDF. A similar ARARs determination is applied to the transfer carts located within the PGS (i.e., the carts are managed as containers in accordance with select provisions of 40 CFR 264 Subpart I). The implementation details are documented in Appendix A for each of the specific Subpart I provisions.

2.2 Toxic Substances Control Act Applicable or Relevant and Appropriate Requirements

The OU 7-10 ROD (DOE-ID 1993) identifies a number of specific TSCA citations as ARARs. The 1998 ESD (DOE-ID 1998) modified project ARARs through inclusion of the following language:

The Agencies are aware of the amended rules under the Toxic Substance Control Act (Federal Register Volume 63, Number 124, Monday, June 28, 1998, 35384, Disposal of Polychlorinated Biphenyls) effective August 28, 1998 and have agreed to comply with the provisions under this rule in implementing the OU 7-10 Staged Interim Action.

The Glovebox Excavator Method Project will comply with the current TSCA regulations, as outlined in the 1998 ESD (DOE-ID 1998).

It is assumed that a portion of the waste zone inventory associated with the project will contain PCBs in a concentration of 50 ppm or greater. However, inventory documentation is not conclusive as to the concentration. Sampling and analysis activities will be planned to determine the PCB concentration of project waste streams.

2.2.1 Toxic Substances Control Act Storage Requirements

The storage requirements presented in Appendix A include inspection, marking, container, and storage facility requirements. The facility requirements for storing PCBs include provisions for the roof, walls, floor, and location (e.g., the facility cannot be located below the 100-year floodwater elevation). Outside storage of PCB-contaminated waste is not allowable except for limited circumstances outlined in the regulations that are generally for short timeframes (see the following paragraph). Therefore, it is assumed that the project design must provide some storage capacity that meets the minimum TSCA storage ARARs.

The determination of whether Stage II materials are contaminated with PCBs will require the receipt of analytical results from the laboratory. Consequently, a period will exist during which drums are

stored without specific knowledge of the applicability of the TSCA storage requirements. It is noted that the requirements of "Storage for Disposal" (40 CFR 761.65[c][1]) allow storage in an area that does not meet the full requirements of TSCA for a period of up to 30 days. This provision should assist project personnel in ensuring compliant storage prior to receipt of analytical results. Of course, if storage occurs within the permitted storage modules in the Transuranic Storage Area (TSA), the allowance for storage provided by 40 CFR 761.65(c)(1) will not require implementation because the modules are TSCA compliant.

2.2.2 Toxic Substances Control Act Floodplain Requirements

As outlined in the requirements section presented above, TSCA ARARs applicable to the project state that materials contaminated with PCBs at concentrations ≥ 50 ppm must not be stored "at a site that is below the 100-year floodwater elevation." In addition to the TSCA requirement, RCRA regulations also regulate treatment, storage, and disposal of hazardous waste within a 100-year floodplain. The requirements are found in "Location Standards" (40 CFR 264.18 Subpart B) and require that "a facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood . . ." The method by which these requirements are being met at the RWMC is defined in the INEEL RCRA Part B permit. Detailed evaluation is beyond the scope of this EDF; however, existing documentation shows that the as-built drainage and diking systems ensure that the requirements are satisfied for the SDA and much of the TSA facility. It is noted that the requirements of TSCA are identified as ARARs for the project; however, the RCRA requirements of 40 CFR 264.18 Subpart B are not ARARs identified in the Pit 9 ROD (DOE-ID 1993). Therefore, compliance with the latter requirements is presented for evaluation purposes only.

An EDF, *OU 7-10 (Pit 9) Staged Interim Action Project Floodplain Issue* (Medina 1999), documented the requirements and floodplain data that were current at the time it was written. Since then, the INEEL has generated an additional hydrologic study of the floodplain boundaries at the RWMC titled *Hydrologic Analyses of the Radioactive Waste Management Complex Area at the Idaho National Engineering and Environmental Laboratory* (INEEL 2002b). Both evaluations will be considered in the discussion presented below.

For clarification, two flooding scenarios must be evaluated for the RWMC area. First, the RWMC is located within a natural topographic depression that tends to hold precipitation and to collect additional run-off from the surrounding slopes. Historically, the SDA has been flooded by local run-off at least three times because of a combination of snowmelt, rain, and warm winds. Dikes and drainage channels were constructed and later improved such that flooding of the SDA has not occurred since 1982. Localized run-off from surrounding slopes is now prevented from entering the SDA by the perimeter drainage channel and dike surrounding the facility. The Big Lost River, 2 mi (3.2 km) north of the RWMC, is at an elevation 30–40 ft (9.1–12.2 m) higher than the SDA. However, due to the topography between the river and the SDA, the Big Lost River poses no flood threat to the RWMC. The Big Lost River flows northeast, away from the RWMC, to its termination in the playas. Therefore, flood concerns in the vicinity of the SDA are related to the localized run-off scenario. Both reports indicate that the existing drainage system and the flood-exclusion dike around the SDA accommodate the estimated peak flows associated with the 100-year flood scenarios evaluated for the RWMC area.

Storage options associated with the project involve storage areas located within the SDA next to Pit 9. Because the flood exclusion dike prevents water from entering the SDA, the water elevation outside of the flood-exclusion dike is not relevant and does not affect the design criteria for these storage options. The general floodplain scenario would affect storage within the Type II storage because the modules are not located within the flood exclusion dike surrounding the SDA. However, as Sheet 4 of hydrologic

analyses of the RWMC at the INEEL shows, the TSA storage modules are all located outside of the 100-year floodplain, based on the most recent modeling and evaluation.

A second flooding scenario that could lead to flooding results from accumulation of precipitation and run-off within the actual SDA. Stormwater retention areas exist in a number of places around the RWMC area, including a retention area within the SDA. The stormwater accumulates in the SDA retention area because of a culvert and head gate structure located at the southern end of Pit 9, where the drainage from the SDA enters the TSA. The SDA retention area is subject to flooding during the 25- and 100-year storm events because of this system. Sheet 2 of the hydrologic analyses of the RWMC area identifies the stage-storage areas at the RWMC. The stage-storage area within the SDA defines the worst-case flood elevation within the SDA at an elevation of 5,008.9 ft (1,526 m). Based on this study and as the system is currently operated, the storage areas near Pit 9 would need to be located above this elevation to avoid inundation during a 100-year storm event, and current design documentation demonstrates that potential storage areas are located at an elevation of 5,009.5 ft (1,527 m).

2.2.3 Toxic Substances Control Act Characterization Requirements

The characterization of waste zone materials for PCB content will be documented in the project Field Sampling Plan (Salomon et al. 2002). The Field Sampling Plan sampling-design planning needs to consider the TSCA provisions discussed below.

Requirements of TSCA documented in 40 CFR 761.1 address a number of important considerations for sampling TSCA liquid and non-liquid wastes (such as requirements for characterization of multiphase wastes, prohibitions on dilution, and analytical reporting considerations). For reference, the text of 40 CFR 761.1 (a) and (b) is presented below.

§761.1 Applicability

(a) This part establishes prohibitions of, and requirements for, the manufacture, processing, distribution in commerce, use, disposal, storage, and marking of PCBs and PCB Items.

(b)(1) This part applies to all persons who manufacture, process, distribute in commerce, use, or dispose of PCBs or PCB Items. Substances that are regulated by this part include, but are not limited to: dielectric fluids; solvents; oils; waste oils; heat transfer fluids; hydraulic fluids; paints or coatings; sludges; slurries; sediments; dredge spoils; soils; materials containing PCBs as a result of spills; and other chemical substances or combinations of substances, including impurities and byproducts and any byproduct, intermediate, or impurity manufactured at any point in a process.

(2) Unless otherwise noted, PCB concentrations shall be determined on a weight-per-weight basis (e.g., milligrams per kilogram), or for liquids, on a weight-per-volume basis (e.g., milligrams per liter) if the density of the liquid is also reported. Unless otherwise provided, PCBs are quantified based on the formulation of PCBs present in the material analyzed. For example, measure Aroclor™ 1242 PCBs based on a comparison with Aroclor™ 1242 standards. Measure individual congener PCBs based on a comparison with individual PCB congener standards.

(3) Most provisions in this part apply only if PCBs are present in concentrations above a specified level. Provisions that apply to PCBs at concentrations of <50 ppm apply also to contaminated surfaces at PCB concentrations of $\leq 10 \mu\text{g}/100 \text{ cm}^2$. Provisions that apply to PCBs at concentrations of ≥ 50 to <500 ppm apply also to contaminated surfaces at PCB concentrations of $> 10/100 \text{ cm}^2$ to $< 100 \mu\text{g}/100 \text{ cm}^2$. Provisions that apply to PCBs at

concentrations of ≥ 500 ppm apply also to contaminated surfaces at PCB concentrations of $\geq 100 \mu\text{g}/100 \text{ cm}^2$.

(4) PCBs can be found in liquid, non-liquid and multi-phasic (combinations of liquid and non-liquid) forms. A person should use the following criteria to determine PCB concentrations to determine which provisions of this part apply to such PCBs.

(i) Any person determining PCB concentrations for non-liquid PCBs must do so on a dry weight basis.

(ii) Any person determining PCB concentrations for liquid PCBs must do so on a wet weight basis. Liquid PCBs containing more than 0.5 percent by weight non-dissolved material shall be analyzed as multi-phasic non-liquid/liquid mixtures.

(iii) Any person determining the PCB concentration of samples containing PCBs and non-dissolved non-liquid materials ≥ 0.5 percent, must separate the non-dissolved materials into non-liquid PCBs and liquid PCBs. For multi-phasic non-liquid/liquid or liquid/liquid mixtures, the phases shall be separated before chemical analysis. Following phase separation, the PCB concentration in each non-liquid phase shall be determined on a dry weight basis and the PCB concentration in each liquid phase shall be determined separately on a wet weight basis.

(iv) Any person disposing of multi-phasic non-liquid/liquid or liquid/liquid mixtures must use the PCB disposal requirements that apply to the individual phase with the highest PCB concentration except where otherwise noted. Alternatively, phases may be separated and disposed of using the PCB disposal requirements that apply to each separated, single-phase material.

(5) No person may avoid any provision specifying a PCB concentration by diluting the PCBs, unless otherwise specifically provided.

(6) Unless otherwise specified, references to weights or volumes of PCBs in this part apply to the total weight or total volume of the material (oil, soil, debris, etc.) that contains regulated concentrations of PCBs, not the calculated weight or volume of only the PCB molecules contained in the material.

These provisions primarily affect project sampling and analysis plans. Current planning provides for separate characterization of liquid phases that may be associated with waste brought into the glovebox cart. Also for reference, the following definitions of liquid and nonliquid PCBs are presented as defined in 40 CFR 761.30:

Liquid PCBs—means a homogenous flowable material containing PCBs and no more than 0.5 percent by weight non-dissolved material.

Nonliquid PCBs—means materials containing PCBs that by visual inspection do not flow at room temperature (25°C or 77°F) or from which no liquid passes when a 100 g or 100 ml representative sample is placed in a mesh number 60 \pm 5% paint filter and allowed to drain at room temperature for 5 minutes.

Based on the definitions, project operations will need to include provisions to visually examine or test individual batches of waste to identify liquid material requiring sampling. The regulations do not

present a de minimis threshold volume that would constitute liquid PCBs, but the definitions are based on a representative sample of the material being managed. Thus, large volumes of nonflowable, solid material associated with small volumes of flowable material may not constitute liquid PCBs based on a representative sample of the overall cartload being managed. The determination will require case-by-case evaluation of materials being managed in the project glovebox.

An additional important consideration associated with the language in 40 CFR 761.1(4)(iv) relates to disposal of liquid PCBs. The regulation requires that persons disposing of multiphase non-liquid/liquid or liquid/liquid mixtures must use the PCB disposal requirements that apply to the individual phase with the highest PCB concentration, except where otherwise noted. Also allowed is the separation of the phases and disposal using the PCB disposal requirements that apply to each separated, single-phase material.

Based on current planning, the project will solidify materials that contain liquids for ease of handling, storage, and waste acceptance criteria compliance. The solidification would occur following sampling of the separate phases, as discussed above. The solidification is viewed as allowable as long as it is not done to circumvent the high temperature incineration requirements of the TSCA. The requirement is specified in 40 CFR 761.50 (a)(2) and states:

(2) No person may process liquid PCBs into non-liquid forms to circumvent the high temperature incineration requirements of 761.60 (a).

Questions have been raised regarding whether this citation prohibits the project from performing the planned solidification step following sampling of the liquid wastes. As clarification, the interpretive guidance from the EPA was examined (*Interpretive Guidance, PCB Question and Answer Manual; Combine Q and A Manual* [as of September 2001], 761.50 Applicability, Question #3, page 39). The following Q&A is relevant:

Q: If a facility has a low-lying, contaminated soil area, can it put the contaminated soil in a rolloff and solidify the contents of the rolloff to ensure that any liquids present do not spill out?

A: You may not process liquid PCBs into non-liquid PCBs to avoid the disposal requirements that apply to liquid PCBs. However, you may solidify the waste if you dispose of it based on the requirements that would have applied before the waste was solidified.

Thus, it is concluded that the project may perform the planned solidification if the waste is disposed of based on the requirements that would have applied before the waste was solidified. In order to ensure that this happens, the following activities will occur:

1. Sampling of the separate waste phases will occur prior to solidification in the PGS transfer cart
2. Careful waste tracking will occur to ensure drums that contained liquid PCBs ≥ 50 ppm (i.e., that were subsequently solidified) are tracked, labeled, and dispositioned properly
3. Drums containing liquid PCBs ≥ 50 ppm are disposed of based on the requirements that would have applied before the waste was solidified.

2.3 Clean Air Applicable or Relevant and Appropriate Requirements

Table A-1 includes provisions for a number of ARARs that address facility air emissions. The ARARs stem from both federal and state regulations. The ARARs that will require implementation during the OU 7-10 Glovebox Excavator Method Project follow. It is noted that the OU 7-10 ROD includes a number of regulations that do not require implementation for the OU 7-10 Glovebox Excavator Method Project due to the project work scope. The ARARs that do not require implementation are presented, along with associated rationale, in Appendix A. The air emissions-related ARARs requiring implementation are listed below:

- “National Emissions Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities,” 40 CFR 61.92–.93
- “Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabrication Operations,” 40 CFR 61.151
- “State of Idaho Prevention of Significant Deterioration Increments,” IDAPA 16.01.01101.05a
- “State of Idaho New Source Review Policy for Toxic Air Pollutants” (Note: This is cited as a to-be-considered in the OU 7-10 ROD)
- “Rules for Control of Fugitive Dust,” IDAPA 16.01.01251 and 16.01.01252.

Details considered important for project ARARs implementation are discussed in the following sections.

2.3.1 Applicable or Relevant and Appropriate Requirements for the National Emission Standards for Hazardous Air Pollutants

The radionuclide National Emission Standards for Hazardous Air Pollutants (NESHAP) documented in the ROD will require implementation for the project.

The NESHAP limits the amount of radionuclides released into the ambient air from the INEEL to an amount that would result in an effective dose equivalent of 10 mrem/yr to any member of the public. Compliance with the dose standard must be demonstrated using annual emission estimates and the dose assessment codes listed in the NESHAP. The NESHAP also requires continuous sampling if the unabated emissions from a source could cause greater than 0.1 mrem/yr to a member of the public. The samples must be analyzed for at least those radionuclides that could contribute greater than 10% of the potential effective dose equivalent. If released without abatement, emissions of particulate^a radioactive material from the retrieval operations could cause a greater than 0.1 mrem/yr dose to a member of the public (Abbott 2002), so continuous record sampling must be performed in accordance with 40 CFR 61, Appendix B, Method 114.

Method 114 specifies stack monitoring and sample collection methods, radionuclide analysis methods, and quality assurance methods for monitoring programs that are conducted for NESHAP

a. The estimated unabated dose caused by volatile radionuclides in the Pit 9 inventory is much less than 10% of the total. Therefore, the OU 7-10 Glovebox Excavator Method Project sampler is designed for collection of only particulate radioactive material.

compliance. Method 114 incorporates by reference ANSI N13.1-1969, "American National Standard Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities," which was updated and superseded by a revision released in May 1999 (referred to here as ANSI 99). The 1969 version of ANSI N13.1 (referred to here as ANSI 69) is no longer endorsed by the ANSI, but the EPA has not completed its review of ANSI 99 and has not determined whether all or only part of the new standard will be required under the new regulations. The EPA regulations will be modified to account for ANSI 99 during rulemaking (65 FR 29933-29939).^b The U.S. Department of Energy Headquarters EH-412 staff has been consulting with the EPA during the EPA's review of ANSI 99, and U.S. Department of Energy (DOE) guidance for implementing ANSI 99 will likely be finalized after the rule has been promulgated. The project's Quality Assurance Project Plan will apply ANSI 99 recommendations without exception.

The ARARs documented at 40 CFR 61.93(a) and (b) also allow a facility to use alternative methods and procedures. In addition to the generic alternative in Section 61.93(b) for "other procedures for which EPA has granted prior approval," there is a specific procedure in 61.93(b)(3) that is available "When it is impractical" to use the specified method. An accurate, documented method approved by EPA can then be substituted. As noted in the document, "Alternative Methods for Radionuclide Air Emissions Monitoring" (DOE 1996), EPA has approved a number of alternative methods for sample collection and measurement. In an April 5, 1995, Memorandum of Understanding between EPA and DOE, the Agencies agreed that a method can be considered "impractical" for reasons that are "site-specific" and include engineering, economic, and health and safety considerations. The DOE Alternative Methods document explained that "Impracticality can derive from technological reasons that might be site- or source-specific, requirements for enhanced public or worker safety, or economic reasons (in terms of costs related to either equipment or measurement time)." In light of the superior accuracy, and therefore improved health and safety protection, afforded by the shrouded probe alternative, the preconditions of Section 61.93(b)(3) have clearly been met as found by EPA. Single-point sampling using the shrouded probe has been approved by the EPA for use at all DOE facilities and is planned for use by the project. The DOE Alternative Methods document states the following:

Furthermore, a memorandum from Dr. Tara O'Toole, DOE Assistant Secretary for Environment, Safety, and Health, dated 12/30/94 stated that EPA has given approval for single point sampling using the shrouded probe technology for effluent monitoring at any DOE facility (see Appendix C). Tests conducted in a nuclear stack at LANL demonstrated that the transmission ratio (ratio of aerosol concentration at the probe exit plane to the concentration in the free stream) was 107% for a 113 L/min shrouded probe, but only 20% for an isokinetic probe that follows the existing EPA standard requirements. The single-point sampling approach using the shrouded probe will meet the performance criteria that the American National Standards Institute (ANSI) is developing to incorporate in its upcoming revision of ANSI N13.1-1969. Modeling results and experimental data have shown that this alternative approach will markedly reduce the loss of sample extracted from the effluent stream, and therefore, provide data that are more representative of the stack radionuclide and/or particulate emissions. The measurement methods will significantly improve the quality of the emissions data that are used to assess doses to the public.

b. As of April 2002, promulgation of the new rule is imminent, and the new rule and standard are expected to be effective on January 1, 2003.

The referenced EPA approval letter package, consisting of a letter from Ms. Tara O'Toole and a second letter from Ms. Mary D. Nichols, are Appendix C of the DOE Alternative Methods document. The December 30, 1994, letter from Ms. O'Toole states:

Attached is a letter from the EPA Assistant Administrator for Air and Radiation, which grants DOE approval to use the alternate approach based single-point sampling and the shrouded probe. The generic EPA approval allows this new technology to be implemented at any DOE facility that requires its use. The alternate approach is currently in use at the Waste Isolation Pilot Project (WIPP) for monitoring its primary stack emissions. DOE sites that are in the process of designing monitoring systems for new facilities or upgrading existing stack monitoring systems are encouraged to use the best methods available. The EPA approval for use of this alternate approach provides DOE facilities an important opportunity to improve emissions monitoring data.

The generic alternate method of approval clearly provides necessary approval for the planned use of the single-point sampling approach for the OU 7-10 Glovebox Excavator Method Project. The EPA encourages the use of the probe, recognizing the benefits of improving the quality of the emissions monitoring data. The EPA approval letter provides a number of prerequisite conditions for use of the single-point sampling system as an alternative approach to the sampling procedures otherwise required to demonstrate compliance with 40 CFR 61 Subpart H. The November 21, 1994, letter from Ms. Nichols states:

The alternate methodology is a performance based procedure described in enclosures 1 and 2 of your August 11, 1994 letter. Accordingly, the standards and criteria for acceptable performance upon which we condition our approval are specified below under the headings of (1) Sampling Location, (2) Shrouded Probe and (3) Optimization of Sample Transport Line.

Thus, based on the EPA alternative method approval package, compliance (i.e., even before the ANSI/HPS N13.1-1999 standard is approved) has been accomplished through satisfaction of the standards and criteria documented in the EPA's approval letter package under the headings quoted above. Although project planning is specifically focused on satisfying the 1999 standard, the project has verified that each of the standards and criteria specified in the EPA approval letter are satisfied by the current project design and approach.

2.3.2 State of Idaho Toxic Air Pollutant Standards

The ROD references the State of Idaho New Source Review Policy for Toxic Air Pollutants. As a policy, the reference in the ROD was as a TBC rather than as an ARAR. For implementation purposes, the project has prepared documentation estimating emissions for State of Idaho air toxics (Abbott 2002). The evaluation indicates that emissions are well below the applicable thresholds documented in the current air toxics rules (reference IDAPA 58.01.01.585 and .586) and the values of the policy that were published at the time of the ROD.

3. REFERENCES

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- 40 CFR 61.92–.93, August 2002, "National Emissions Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 61.151, August 2002, "Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabrication Operations," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 264 Subpart I, April 2002, "Use and Management of Containers," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 264, Subpart O, February 2002, "Incinerators," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 264.18, Subpart B, April 2002, "Location Standards," *Code of Federal Regulations*, Office of the Register.
- 40 CFR 300, July 2002, "National Oil and Hazardous Substances Pollutions Contingency Plan," *Code of Federal Regulations*, Office of the Federal Register.
- 40 CFR 761.65(c)(1), February 2002, "Storage for Disposal," *Code of Federal Regulations*, Office of the Federal Register.
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- DOE-ID, 2000, "Draft Operable Unit 7-10 (OU 7-10) Staged Interim Action Project, Stage II, RD/RA Work Plan Primary Deliverable Submittal," DOE/ID-10767, U.S. Department of Energy Idaho Operations Office, Idaho Falls, Idaho, June 2000.
- IDAPA 16.01.01101.05a, "State of Idaho Prevention of Significant Deterioration Increments," Idaho Administrative Procedures Act.
- IDAPA 16.01.01251 and 16.01.01252, "Rules for Control of Fugitive Dust," Idaho Administrative Procedures Act.
- INEEL, 2001, *Waste Area Group 7 Analysis of OU 7-10 Stage II Modifications*, INEEL/EXT-01-01105, Idaho National Engineering Laboratory, Bechtel BWXT Idaho, LLC, Idaho Falls, Idaho, October 2001.
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Appendix A

OU 7-10 Applicable or Relevant and Appropriate Requirements Requiring Implementation for the OU 7-10 Glovebox Excavator Method Project

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Table A-1. Operable Unit 7-10 applicable or relevant and appropriate requirements requiring implementation for the OU 7-10 Glovebox Excavator Method Project.^a

Requirement ^b	Citation	Implementation Details/Comments
RCRA ARARs		
Characteristics of Hazardous Waste (Provisions not listed—reference cited regulations for definitions of characteristic hazardous wastes.)	IDAPA 16.01.05005 (40 CFR 261.20–24)	Provisions apply to the identification of characteristic hazardous wastes. Provisions apply to hazardous waste determinations conducted as described in the project Waste Management Plan. Implementing document(s): <i>Waste Management Plan for the Operable Unit 7-10 Glovebox Excavator Method Project</i> , INEEL/EXT-02-00767 (formerly DOE/ID-10789, subsequently referred to as “Waste Management Plan”), INEEL waste management MCPs implemented by Waste Generator Services (i.e., <i>Companywide Manual 17 – Waste Management</i> , referred to hereafter as “INEEL waste management MCPs”).
RCRA Subpart I—Use and Management of Containers	IDAPA 16.01.05008 (40 CFR 264.171–178) Subpart I	Onsite CERCLA storage of the repackaged waste zone materials/secondary/D&D waste streams will require implementation of the substantive provisions of Subpart I (see implementation details below). Subpart I requirements are applied as relevant and appropriate to the PGS transfer carts, as discussed in Section 2.1.2.1 of this EDF.
<i>Condition of Containers:</i> If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this part.	40 CFR 264.171	All Pit 9 wastes retrieved in the OU 7-10 Glovebox Excavator Method Project will be repackaged into new drums that are in good condition. Project secondary waste streams that are subject to RCRA ARARs will also be containerized such that this provision is met as required by internal INEEL MCPs. The PGS transfer carts will be inspected, verified, and maintained to satisfy this requirement (i.e., will be in good condition). Implementing document(s): Waste Management Plan, INEEL waste management MCPs.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
<p><i>Compatibility of Waste With Containers:</i></p> <p>The owner or operator must use a container made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.</p>	40 CFR 264.172	<p>The project design provides for installation of appropriate liners in project storage drums. Evaluation has shown that the use of high-density polyethylene liners will ensure compatibility of Pit 9 waste in the drums. The evaluation is documented in EDF-2337, <i>Process Component Compatibility Test in Carbon Tetrachloride for the OU 7-10 Glovebox Excavator Method Project</i>.</p> <p>The PGS transfer carts, constructed of stainless steel, are compatible with the waste.</p> <p>Implementing document(s): to be determined; INEEL MCPs.</p>
<p><i>Management of Containers:</i></p> <p>(a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.</p> <p>(b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.</p>	40 CFR 264.173	<p>The ARARs apply to any CERCLA container storage areas (i.e., storing hazardous/mixed wastes) operated during construction, operations, and D&D&D. Operations and Waste Generator Services personnel will be required to follow provisions of INEEL waste management MCPs that address this requirement.</p> <p>The PGS operations are consistent with satisfying the provisions.</p> <p>Implementing document(s): INEEL waste management MCPs.</p>
<p><i>Inspections:</i></p> <p>At least weekly, the owner or operator must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.</p>	40 CFR 264.174	<p>The ARARs apply to any CERCLA container storage areas (i.e., storing hazardous/mixed wastes) operated during construction, operations, and D&D&D. Operations and Waste Generator Services personnel will be required to follow provisions of INEEL waste management MCPs.</p> <p>Operational inspections within the PGS will ensure that PGS transfer carts are not leaking or deteriorating.</p> <p>Implementing documents: INEEL waste management MCPs.</p>

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Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
<i>Containment:</i>		
(a) Container storage areas must have a containment system that is designed and operated in accordance with paragraph (b) of this section, except as otherwise provided by paragraph (c) of this section.	40 CFR 264.175	At minimum, storage areas will comply with the provisions of 40 CFR 264.175 (c)(1) or (2), because free liquid storage in these areas is not expected following solidification in the PGS. As contingency, if free liquids require storage, the containment provisions will be satisfied through the use of spill pallets or storage within a RCRA/TSCA hazardous waste storage unit (e.g., similar in size to a cargo container).
(b) A containment system must be designed and operated as follows:		Containment for the PGS transfer carts is provided, based on the expected minimal volumes of free liquids, by the drum loadout enclosure and Retrieval Confinement Structure floor and structure. In addition, it is noted that liquids are not stored in the PGS transfer carts. The liquids are solidified as part of PGS operational steps.
(1) A base must underly the containers which is free of cracks or gaps and is sufficiently impervious to leaks, spills, and accumulated precipitation until the collected material is detected and removed.		Implementing document(s): Waste Management Plan, INEEL waste management MCPs.
(2) The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.		
(3) The containment system must have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.		
(4) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in paragraph (b)(3) of this section to contain any run-on which might enter the system.		See above.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
<p>(5) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.</p> <p>(c) Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by paragraph (b) of this section, except as provided by paragraph (d) of this section or provided that:</p> <p>(1) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or</p> <p>(2) The containers are elevated or are otherwise protected from contact with accumulated liquid.</p> <p><i>Special requirements for ignitable or reactive waste:</i></p> <p>(a) Containers holding ignitable or reactive waste must be located at least 15 m (50 ft) from the facility's property line.</p>	<p>40 CFR 264.176</p>	<p>All OU 7-10 Glovebox Excavator Method Project storage areas are located more than 50 ft (15 m) from the INEEL boundary.</p> <p>Implementing documents: NA.</p>

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
<i>Special requirements for incompatible wastes</i>		
(a) Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), must not be placed in the same container, unless Section 264.17(b) is complied with.	40 CFR 264.177	The project approach to ensuring that the requirements of 264.177 are met is documented in the report, "Evaluation of Chemical Compatibilities of the OU 7-10 Glovebox Excavator Method Project," INEEL/EXT-01-01587. The document provides analytical justification for commingling of OU 7-10 Glovebox Excavator Method waste streams. The evaluation concludes that the waste streams are not incompatible at ambient temperature conditions under which the materials will be managed. Visual observation of the repackaging operations will be performed to ensure that incompatible chemical reactions, although not anticipated, are identified.
(b) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.		For storage at the OU 7-10 project location, chemical compatibility considerations will be addressed in accordance with INEEL MCPs based on INEEL/EXT-01-01587 and waste generator services direction.
(c) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.		Implementing documents: INEEL waste management MCPs, INEEL/EXT-01-01587.
<i>Closure:</i>	40 CFR 264.178	Project CERCLA storage will be closed in accordance with the 264.178 provisions.
At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed.		The PGS and transfer carts will be closed in accordance with 264.178 provisions. Implementing document(s): INEEL waste management MCPs, project D&D plans.
RCRA Subpart D—Treatment Standards	IDAPA 16.01.05011, 40 CFR 268.41–43, .45	As stated in Section 2.1, project waste streams destined for disposal at the WIPP are not required to meet RCRA LDR standards.
The purpose of this section is to ensure waste is disposed and treated in accordance with applicable land disposal restrictions.		The LDR treatment standards may apply to waste streams not eligible for transfer to the Waste Isolation Pilot Plant. Wastes sent for disposal at locations other than BNFL will have to meet all current requirements of the waste management facility's waste acceptance criteria. Implementing document(s): For potential secondary waste disposal – Project Waste Management Plan; facility WAC documents (e.g., RRWAC); INEEL waste management MCPs.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
TSCA PCB Requirements		
General Applicability Provisions		
(a) This part establishes prohibitions of, and requirements for, the manufacture, processing, distribution in commerce, use, disposal, storage, and marking of PCBs and PCB Items. The specific provisions are identified in Section 2.2 of the EDF and are not listed in this table.	40 CFR 761.1	As discussed in Section 2.2 of the EDF, characterization considerations documented in 761.1 must be addressed by the OU 7-10 Glovebox Excavator Method Project. See Section 2 for a detailed discussion of the associated issues, including characterization requirements for multiphase wastes. Implementing document(s): Field Sampling Plan, Data Quality Objectives.
Use of Decontaminated Materials		
(1) Any person may use equipment, structures, other non-liquid or liquid materials that were contaminated with PCBs during manufacture, use, servicing, or because of spills from, or proximity to, PCBs greater than or equal to 50 ppm, including those not otherwise authorized for use under this part, provided: i. The materials were decontaminated in accordance with: (A) TSCA PCB disposal approval issued under Subpart D of this part; (B) Section 761.79; or (C) Applicable EPA PCB spill cleanup policies (e.g., TSCA, RCRA, CERCLA, EPA regional) in effect at the time of the decontamination; (ii) If not previously decontaminated, the materials now meet an applicable decontamination standard in Section 79(b).	40 CFR 761.30(u)	Decontamination per the authorization is interpreted to apply to the final facility decontamination phase aimed at achieving final disposal or "free release" of OU 7-10 equipment and structures. If "free release" of equipment were to be pursued, the equipment would be decontaminated as required; however, it is anticipated that project equipment and structures will not be "free released" for reuse but will be characterized/decontaminated for disposal at the conclusion of project activities. Implementing document(s): NA.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
<i>Marking Requirements:</i>		
(a) Each of the following items in existence on or after July 1, 1978 shall be marked as illustrated in Figure 1 in 761.45(a): The mark illustrated in Figure 1 is referred to as ML throughout this subpart.	761.40	Containers and storage areas with PCBs ≥ 50 ppm will be marked with the required markings. Items characterized as below the relevant threshold will not require markings. Implementing documents: INEEL waste management MCPs.
(1) PCB Containers		
(10) Each storage area used to store PCBs and PCB items for disposal.		
(e) As of October 1, 1979, applicable PCB items in paragraphs (a)(1), (a)(6), (a)(7), and (a)(8) of this section containing PCBs in concentrations of 50 to 500 ppm shall be marked with the M_L mark as described in Section 761.45(a).		
(h) All marks required by this subpart must be placed in a position on the exterior of the PCB items, storage units, or transport vehicles so that the marks can be easily read by any persons inspecting or servicing the marked PCB items, storage units, or transport vehicles.		
<i>Marking formats.</i>		
The following formats shall be used for marking:	761.45	The appropriate markings will be implemented. Use of the small mark, M_s , is not anticipated.
(a) Large PCB Mark- M_L (Refer to Figures in regulations--Not reproduced in this matrix).		Implementing documents: INEEL waste management MCPs.
Small PCB Mark- M_s . (Refer to regulations--Not reproduced in this matrix)		

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
Subpart D—Storage and Disposal		
761.50 Applicability (selected provisions)	761.50 (a)(2)(4)(6)	The solidification of liquids potentially containing PCBs is discussed in Section 2.2 of the EDF. Processing of liquids into solid forms is deemed acceptable if the resulting waste streams are managed considering the disposal requirements applicable to the original waste form (see Section 2.2 for a more complete discussion).
(a) <i>General PCB disposal requirements.</i> Any person storing or disposing of PCB waste must do so in accordance with subpart D of this part. The following prohibitions and conditions apply to all PCB waste storage and disposal:		Spill provisions will apply to active spills of PCB contamination in areas outside of the Retrieval Confinement Structure or the digface. Spills or releases at the digface are considered part of ongoing remedial activities and are not appropriately addressed by the provision. Spills of materials after repackaging (e.g., in storage) will be assessed for the need for cleanup per the spill cleanup policy or as PCB remediation waste as stipulated in 761.50(b)(3)(ii).
(2) No person may process liquid PCBs into non-liquid forms to circumvent the high temperature incineration requirements of §761.60(a).		Implementing document(s): INEEL waste management MCPs, Field Sampling Plan (i.e., defines characterization of liquid and solid PCBs).
(4) Spills and other uncontrolled discharges of PCBs at concentrations of ≥50 ppm constitute the disposal of PCBs.		
(6) Any person storing or disposing of PCBs is also responsible for determining and complying with all other applicable Federal, State, and local laws and regulations.		
(3) PCB Remediation Waste (Provisions not listed)	761.50(b)(3)(i),(ii),(iii)	The regulations do not require cleanup of soil contaminated prior to 1978, as would be the case for Pit 9, unless the Regional Administrator determines an unreasonable risk from PCBs exists. The OU 7-10 action is not being implemented due to a determination from the Regional Administrator as described in this section, but in order to implement the CERCLA action. In the event that a party unilaterally decides to implement cleanup, then the requirements of 761.61 must be followed. The requirements of 761.61 are, therefore, considered applicable to project activities that involve disposal of PCBs.
The provisions specify disposal requirements for PCB remediation waste. Requirements vary depending upon the timeframe the waste is disposed, spilled, or released into the environment.		Provisions of (ii) mandate that active spills of PCB remediation waste (e.g., if a repackaged drum were spilled) be disposed of either in compliance with the PCB Spill Cleanup Policy or in accordance with provisions of 761.61.
		Implementing document(s): INEEL waste management MCPs.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
(7) <i>PCB/Radioactive waste</i> . (i) Any person storing PCB/radioactive waste ≥ 50 ppm PCBs must do so taking into account both its PCB concentration and its radioactive properties, except as provided in §761.65(a)(1), (b)(1)(ii), and (c)(6)(i).	761.50 (b)(7)	Disposal and storage of PCB/radioactive waste must be conducted taking into account both its PCB concentration and its radioactive properties. Implementing document(s): INEEL waste management MCPs.
(ii) Any person disposing of PCB/radioactive waste must do so taking into account both its PCB concentration and its radioactive properties. If, taking into account only the properties of the PCBs in the waste (and not the radioactive properties of the waste), the waste meets the requirements for disposal in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill (e.g., PCB bulk product waste under §761.62(b)(1)), then the person may dispose of the PCB/radioactive waste, without regard to the PCB component of the waste, on the basis of its radioactive properties in accordance with all applicable requirements for the radioactive component of the waste.		

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Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
<p><i>PCB Remediation Waste</i></p> <p>This section provides cleanup and disposal options for PCB remediation wastes. Any person cleaning up and disposing of PCBs managed under this section shall do so based on the concentration at which the PCBs are found. This section does not prohibit any person from implementing temporary emergency measures to prevent, treat, or contain further releases or mitigate migration to the environment of PCBs or PCB remediation waste.</p> <p>Specific provisions of subsections (a), (b) and (c) are not listed.</p>	40 CFR 761.61(a)(b)(c)	<p>Disposal options will apply to PCB remediation waste generated during project activities. The OU 7-10 project will work with WGS personnel to identify appropriate disposal standards, based on PCB, radiological, and other chemical contamination levels that apply to waste streams.</p> <p>Implementing documents: INEEL waste management MCPs.</p>
<p>Disposal of wastes generated as a result of research and development activities authorized under 40 CFR 761.30(j) and chemical analysis of PCBs.</p> <p>This section provides disposal requirements for wastes generated during and as a result of research and development authorized under 40 CFR 761.30(j). This section also provides disposal requirements for wastes generated during the chemical analysis of samples containing PCBs under 40 CFR 761, including Sections 761.30, 761.60, 761.61, 761.62, and 761.79. For determining the presence of PCBs in samples, chemical analysis includes: sample preparation, sample extraction, extract cleanup, extract concentration, addition of PCB standards, and instrumental analysis.</p> <p>(a) Portions of samples of a size designated in a chemical extraction and analysis method for PCBs and extracted for purposes of determining the presence of PCBs or concentration of PCBs are unregulated for PCB disposal under this part.</p>	40 CFR 761.64	<p>Disposal provisions are applicable to project sample material generated during characterization of PCBs. Altered sample wastes may be dispositioned by the laboratory as part of their routine waste streams, as directed and coordinated by waste generator services. Other sample wastes may be returned to the OU 7-10 project, as described in the project Field Sampling Plan. Sample waste stream disposal/storage will be coordinated with WGS personnel.</p> <p>Implementing documents: Field Sampling Plan; facility WAC (e.g., RRWAC); INEEL waste management MCPs.</p>

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
All other wastes generated during these activities are regulated for disposal based on their concentrations at the time of disposal as follows: (1) Liquid wastes, including rinse solvents, must be disposed of according to 40 CFR 761.61(a)(5)(iv). (2) Non-liquid wastes must be disposed of in the same manner as non-liquid cleaning materials and personal protective equipment waste according to 40 CFR 761.61(a)(5)(v)(A).	40 CFR 761.64(b)(1), and (2)	Applicable to project wastes generated during sampling and analysis activities. Implementing documents: Field Sampling Plan; facility WAC (e.g., RRWAC); INEEL waste management MCPs.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
<p>Storage for disposal.</p> <p>Except as provided in paragraphs (b)(2), (c) (1), (c)(7),(c)(9), and (c)(10) of this section, after July 1, 1978, owners or operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following storage unit requirements:</p> <p>(1) The facilities shall meet the following criteria:</p> <p>i. Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB items</p> <p>ii. An adequate floor that has continuous curbing with a minimum of 6-in. high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB article or PCB container or 25% of the total internal volume of all PCB articles or PCB containers stored there, whichever is greater.</p> <p>PCB/radioactive wastes are not required to be stored in an area with a minimum 6-in. high curbing. However, the floor and curbing must still provide a containment volume equal to at least two times the internal volume of the largest PCB container or 25% of the total internal volume of all PCB containers stored there, whichever is greater</p> <p>iii. No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area</p>	<p>40 CFR 761.65(b)(1)(i)-(v)</p>	<p>For CERCLA waste storage purposes, if PCBs require storage the TSCA provisions will be satisfied through the use of spill pallets or storage within a RCRA/TSCA portable storage units (e.g., similar in size to a cargo container).</p> <p>Reference Section 2.2 of the EDF for a discussion of the 100-year floodplain status of the OU 7-10 facility.</p> <p>Implementing document(s): INEEL waste management MCPs, Waste Management Plan.</p>

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
iv. Floors and curbing constructed of Portland cement, concrete, or a continuous, smooth, non-porous surface as defined at 40 CFR 761.3; which prevents or minimizes penetration of PCBs		See above.
v. Not located at a site that is below the 100-year floodwater elevation.		
(3) Any storage area subject to the requirements of paragraph (b) or paragraph (c)(1) of this section shall be marked as required in subpart C-761.40(a)(10).	761.65 (c)(3)	Marking provisions will be implemented as listed at 761.40 above.
(4) No item of movable equipment that is used for handling PCBs and PCB items in the storage facilities and that comes in direct contact with PCBs shall be removed from the storage facility area unless it has been decontaminated as specified in 761.79.	761.65 (c)(4)	Decontamination of equipment will be implemented if PCB-contaminated equipment is to be removed from the storage facility. Implementing documents: INEEL waste management MCPs.
(5) All PCB items in storage shall be checked for leaks at least once every 30 days. Any leaking PCB items and their contents shall be transferred immediately to properly marked non-leaking containers. Any spilled or leaked materials shall be immediately cleaned up and the materials and residues containing PCBs shall be disposed of in accordance with Section 761.61. Records of inspections, maintenance, cleanup and disposal must be maintained in accordance with Section 761.180(a) and (b).	761.65 (c)(5)	Applicable to storage in the event PCBs ≥ 50 ppm are stored. Implementing document(s): INEEL waste management MCPs.

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Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
(i) Containers other than those meeting HMR performance standards may be used for storage of PCB/radioactive waste provided the following requirements are met: (A) Containers used for storage of liquid PCB/radioactive wastes must be non-leaking. (B) Containers used for storage of non-liquid PCB/radioactive wastes must be designed to prevent the buildup of liquids if such containers are stored in an area meeting the containment requirements of paragraph (b)(1)(ii) of this section, as well as all other applicable state or federal regulations or requirements for control of radioactive materials. (C) Containers used to store both liquid and non-liquid PCB/radioactive wastes must meet all regulations and requirements pertaining to nuclear criticality safety. Acceptable container materials currently include polyethylene and stainless steel provided that the container material is chemically compatible with the wastes being stored. Other containers may be used to store both liquid and non-liquid PCB/radioactive wastes if the users are able to demonstrate, to the appropriate Regional Administrator and other appropriate regulatory authorities (i.e., Nuclear Regulatory Commission, DOE or the DOT), that the use of such containers is protective of health and the environment as well as public health and safety.	40 CFR 761.65(c)(6) (i)	Appropriate containers shall be selected for storage. Project operations, WGS, and packaging and transportation personnel will coordinate container selection and procurement activities. Implementing documents: INEEL waste management MCPs.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
(ii) The following DOT specification containers that conform to the requirements of 49 CFR, Chapter I, Subchapter C in effect on September 30, 1991, may be used for storage and transportation activities that are not subject to DOT regulation, and may be used on a transitional basis as permitted at 49 CFR 171.14. For liquid PCBs: Specification 5 container without removable head, Specification 5B container without removable head, Specification 6D overpack with Specification 2S or 2SL polyethylene containers, or Specification 17E container. For non-liquid PCBs: Specification 5 container, Specification 5B container, or Specification 17C container.	40 CFR 761.65(c)(6)(ii)	Appropriate containers shall be selected for PCB storage. Project operations, WGS, and packaging and transportation personnel will coordinate container selection and procurement activities. Implementing documents: INEEL waste management MCPs.
(8) PCB items shall be dated on the item when they are removed from service for disposal. The storage shall be managed so that the PCB items can be located by this date. Storage containers provided in paragraph (c)(7) of this section, shall have a record that includes for each batch of PCBs the quantity of the batch and date the batch was added to the container. The record shall also include the date, quantity, and disposition of any batch of PCBs removed from the container.	40 CFR 761.65(c)(8)	Containers removed from Pit 9 will be marked with the date of retrieval. Implementing document(s): INEEL waste management MCPs.
In order to qualify for the exemption in paragraph (i)(2)(i) and (i)(2)(ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to sample collector must:	761.65 (i)(3)	Exemptions and associated marking requirements are applicable to project sample management activities. Implementing document(s): INEEL MCPs.
(i) Comply with applicable DOT or U.S. Postal Service (USPS) shipping requirements, found respectively in 49 CFR 173.345 and U.S. Postal Regulations 652.2 and 652.3.		

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
(ii) Assure that the following information accompanies the sample: (A) The sample collector's name, mailing address, and telephone number. (B) The laboratory's name, mailing address, and telephone number. (C) The quantity of the sample. (D) The date of shipment. (E) A description of the sample. (iii) Package the sample so that it does not leak, spill, or vaporize from its packaging.	761.65(i)(4)	Disposal criteria will be met for sample disposition. It is anticipated that samples will be returned to OU 7-10, but disposition by the laboratory is acceptable if appropriate criteria can be met. Implementing document(s): INEEL waste management MCPs.
When the concentration of the PCB sample has been determined, and its use is terminated, the sample must be properly disposed. A laboratory must either manifest the PCB waste to a disposer or commercial storer, as required under 761.208, retain a copy of each manifest, as required under 761.209, and follow up on exception reporting, as required under 761.215(a) and (b), or return the sample to the sample collector who must then properly dispose of the sample. If the laboratory returns the sample to the sample collector, the laboratory must comply with the shipping requirements set forth in paragraph (i)(3)(i) through (i)(3)(iii) of this section.		

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
Section 761.79 Decontamination standards and procedures (provisions not listed).	40 CFR 761.79	<p>Section 761.79 contains decontamination standards, procedures, disposal limitations, and sampling and record-keeping provisions that apply in the event decontamination of equipment and structures occurs for items contaminated with ≥ 50 ppm PCBs or with PCB surface concentration $> 10 \text{ ug}/100 \text{ cm}^2$.</p> <p>As stated under 761.30u, in the OU 7-10 remedial context, decontamination per 761.79 is not expected to occur until the final facility decontamination phase aimed at achieving final disposal or "free release" of OU 7-10 equipment, structures, etc. The decontamination efforts associated with final facility decontamination will be defined in a decontamination plan and associated procedures.</p> <p>Implementing document(s): Decontamination plan and associated procedures.</p> <p>Sampling protocols applicable to decontamination efforts, as described under 761.79 above.</p> <p>Implementing document(s): Decontamination plan and associated procedures.</p>
<p><i>Applicability.</i></p> <p>This subpart provides sample site selection procedures for large, nearly flat non-porous surfaces, and for small or irregularly shaped non-porous surfaces. This subpart also provides procedures for analyzing the samples and interpreting the results of the sampling. Any person verifying completion of self-implementing cleanup and on-site disposal of non-porous surfaces under Section 761.61(a)(6), or verifying that decontamination standards under Section 761.79(b)(3) are met, must use these procedures.</p> <p>Provisions are not enumerated.</p>	40 CFR 761.300 Subpart (P) (all)	
<p><i>Background:</i></p> <p>The double wash/rinse procedure is used to quickly and effectively remove PCBs on surfaces. It is important to select and use the proper cleanup equipment, to conduct the procedure correctly so as not to redistribute PCBs, and to comply with disposal requirements for all cleanup materials.</p>	40 CFR 761.300 Subpart S (all)	<p>Protocol applicable to decontamination efforts, as described under 761.79 above.</p> <p>Implementing document(s): Decontamination plan and associated procedures.</p>

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
Clean Air Act ARARS		
Rules for Control of Fugitive Dust		
The purpose of Sections 251—300 is to require that all reasonable precautions be taken to prevent the generation of fugitive dust.	IDAPA 16.01.01251	INEEL construction practices involve application of water to control fugitive dust from equipment, as required by project Storm Water Pollution Prevention Plans.
General rules. All reasonable precautions shall be taken to prevent particulate matter from becoming airborne.	IDAPA 16.01.01252	Test plans will address specific ARAR considerations, including any mitigation required to control fugitive dust. Operational approaches for the project include misting to control dust at generation. In addition, all releases from retrieval activities are routed through the off-gas control system (e.g., HEPA filtered) and stack. The D&D plans will address specific ARAR considerations, including any mitigation required to control fugitive dust. Implementing document(s): Design documentation, test plans, operations procedures, D&D plan.

NESHAPS for Radionuclides

Aggregate INEEL radionuclide emission limit.

Emissions of radionuclides to the ambient air from DOE facilities shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr.

40 CFR 61.92

The “Operable Unit 7-10 (Pit 9) Glovebox Excavator Method Air Emission Evaluation,” EDF-2322 (formerly EDF ER-WAG7-109), Rev. 1, calculates an unabated maximally exposed individual dose that exceeds the NESHAP monitoring criterion of 0.1 mrem/year. Abated dose is also calculated below the 10-mrem/year standard.

Releases for facility decontamination activities have not been assessed to date, but will require assessment upon development of facility decontamination plans and will be based upon characterization of the facility following operations.

Implementing document(s): EDF-2322 (formerly EDF ER-WAG7-109), PLN-652.

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Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
Continuous radionuclide emission monitoring requirement based on potential (unabated) emissions Radionuclide emission measurements in conformance with the requirements of paragraph (b) (continuous emission monitoring) of this section shall be made at all release points which have a potential to discharge radionuclides into the air in quantities which could cause an effective dose equivalent in excess of 1% of the standard (0.1 mrem/yr). All radionuclides which could contribute greater than 10% of the potential effective dose equivalent for a release point shall be measured. For other release points which have a potential to release radionuclides into the air, periodic confirmatory measurements shall be made to verify the low emissions.	40 CFR 61.93(b)(4)(i)	Continuous monitoring in accordance with this section is required due to the unabated dose estimate in excess of 0.1 mrem/yr. The radionuclides requiring monitoring include the five plutonium isotopes and Americium 241. The draft document, "Quality Assurance Project Plan, NESHAPS Monitoring of the Operable Unit (OU) 7-10 Glovebox Excavator Method Project," PLN-652, addresses monitoring and associated quality assurance/quality control details. Monitoring is planned for the operational period only. Any required monitoring details will be developed in association with the facility decontamination plans. Implementing document(s): PLN-652
To determine whether a release point is subject to the emission measurement requirements of paragraph (b) of this section, it is necessary to evaluate the potential for radionuclide emissions for that release point. The estimated radionuclide release rates shall be based on the discharge of the effluent stream that would result if all pollution control equipment did not exist, but the facilities operations were otherwise normal.	40 CFR 61.93(b)(4)(ii)	See discussion under 61.92 above. Implementing document(s): EDF-2322 (formerly EDF ER-WAG7-109).

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
State of Idaho New Source Review Policy for Toxic Air Pollutants (policy not listed)	IDAPA 58.01.01.585-586 (Current IDAPA citation)	The document, "Operable Unit 7-10 (Pit 9) Glovebox Excavator Method Air Emission Evaluation," EDF-2322 (formerly EDF ER-WAG7-109), Rev. 1, calculates uncontrolled toxic air pollutant (TAP) emissions for each species listed in Appendix 1 and 2 of the State of Idaho TAP policy. The SCREEN3 model was used to assess worst-case TAP concentrations and for assessment of onsite worker impacts. For carbon tetrachloride, the SCREEN3 results indicated an exceedance of the acceptable ambient concentrations for carcinogens. ISCST3 was used to reassess the annual average air concentration from a unit (1 g/s) release of the carcinogenic contaminants. All resulting concentrations are less than applicable State of Idaho TAP acceptable ambient concentrations for carcinogens and acceptable ambient concentrations for noncarcinogens (including criteria in current TAP rules and the State of Idaho New Source Review Policy for TAPs that is an ARAR per the ROD). Because ambient air concentrations do not exceed State of Idaho TAP criteria, Best Available Control Technology is not required, nor is associated monitoring.
National Emission Standards for Hazardous Air Pollutants – Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations. Each owner or operator of any inactive waste disposal site that was operated by sources covered under 61.142, 61.144, or 61.147 and received deposits of asbestos-containing waste material generated by the sources, shall: (a) Comply with one of the following: (1) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this paragraph; or (refer to regulations for subsequent citations).	40 CFR 61.151 (a)	Implementing document(s): EDF-2322 (formerly EDF ER-WAG7-109), Rev. 1. Because any potential project emissions, including asbestos fibers, will be routed through redundant HEPA filtration, the visible emissions criteria will be satisfied. Note that asbestos emissions are not expected based on project inventory documentation indicating that asbestos-type filters are located elsewhere in the pit. Implementing documents: NA.

Table A-1. (continued).

Requirement ^b	Citation	Implementation Details/Comments
Prevention of Significant Deterioration	IDAPA 16.01.01101,05.a	The project Air Emissions Evaluation (EDF-2322, formerly EDF ER-WAG7-109) evaluates criteria for air pollutant emissions associated with the planned 200-kW emergency diesel generator and the 110-hp backhoe. Maximum air concentrations for SO _x , NO _x , CO, and PM-10 are all far below PSD significant impact levels.
		Implementing document(s): OU 7-10 Air Emissions Evaluation (EDF-2322, formerly EDF ER-WAG7-109).
TBC Guidance		
DOE 5400.5 "Radiation Protection of the Public and the Environment"	NA	Specific requirements are not listed. Implementing document(s): Various including Radiological Controls Manual; Air Emissions Evaluation (EDF-2322, formerly EDF ER-WAG7-109).
DOE 5820.2a "Radioactive Waste Management"	NA	Specific requirements are not listed. Order superseded by DOE Order 435.1. Requirements of DOE 435.1 will actually be implemented in lieu of 5820.2a. Implementing document(s): Various including Companywide Manual 17; Facility WAC, INEEL RRWAC; Waste Management Plan.
OSWER 9347.3-01FS, July 1989, "Super Fund LDR Guide #1, overview of RCRA Land Disposal Restrictions."	NA	Guidance document for reference in association with project waste management activities. Implementing document(s): NA.

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Table A-1. (continued).

Table A-1, Part 2. OU 7-10 ARARs and TBCs with no required implementation for the Glovebox Excavator Method Project.^a

Requirement/Citation	Phase Applicability/Implementation Details
IDAPA 16.01.05008, 40 CFR 264.341–.343,.345, .347(a)(1)(2), .351	No implementation required. Project does not involve incineration processes.
Subpart O—Incinerators	
40 CFR 264.1032–1034	No implementation required. Project does not involve process vents.
Subpart AA—Air Emission Standards for Process Vents	
40 CFR 264.1052–.1063	No implementation required. Project does not involve use of regulated equipment referenced in the ARAR.
Subpart BB—Air Emission Standards for Equipment Leaks	
IDAPA 16.01.05008, 40 CFR 264 310(a),(b)(1), (4)–(6)	No implementation required. Project does not involve closure of OU 7-10. It is anticipated that this ARAR will require implementation as part of Stage III activities.
Subpart N—Landfills	
IDAPA 16.01.05008, 40 CFR 264.192–.199	No implementation required. Project does not include treatment or storage in tanks.
Subpart J—Tank Systems	
IDAPA 16.01.05008, 40 CFR 264.601	No implementation required. Project does not include treatment or storage in miscellaneous units.
Subpart X – Miscellaneous Units	
IDAPA 16.01.05004, 40 CFR 260.20, .22	No implementation required. Project does not involve treatment of wastes to Record of Decision delisting levels.
Subpart C—Rulemaking Petitions	
TSCA ^b	See endnote b.
40 CFR 761	
40 CFR 61.52(b)	No implementation required. Requirement addresses source categories for mercury waste processing operations. The requirement is implemented via source-testing activities as is appropriate for processing operations. The requirement is not relevant and appropriate for the temporary, fugitive emissions from project retrieval activities.
NESHAP for Mercury	
40 CFR 61.32(a)	No implementation required. Requirement addresses source categories for beryllium waste-processing operations. The requirement is implemented via source-testing activities as is appropriate for processing operations. The requirement is not relevant and appropriate for the temporary, fugitive emissions from project retrieval activities.
NESHAP for Beryllium	

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Table A-1. (continued).

Requirement/Citation	Phase Applicability/Implementation Details
IDAPA 16.01.01502, Rules for Control of Incinerators	No implementation required. Project does not involve incineration.
OSWER 9347.3-09FS, September 1990, "A Guide to Delisting of RCRA Wastes for Superfund Remedial Responses."	Delisting guidance is not relevant to planned activities.
OSWER 9234.2-04FS, October 1989, "RCRA ARARs: Focus on Closure Requirements."	Closure guidance is not relevant to planned project activities. Pit closure requirements are considered applicable to Stage III.
CERCLA, NCP Final Rule Preamble (55 FR 8743)	Hybrid closure scenario/requirements are not relevant to planned project activities. Pit closure requirements are considered applicable to Stage III.
<p>a. Administrative provisions are not included.</p> <p>b. The TSCA sections not listed in Table A-1 were evaluated and do not require implementation, as the requirements are either administrative or are not applicable to the scope of the project.</p> <p>ARAR = applicable or relevant and appropriate requirement</p> <p>CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act</p> <p>CFR = Code Federal Regulations</p> <p>D&D&D = deactivation, decontamination, and decommissioning</p> <p>DOE = U.S. Department of Energy</p> <p>DOT = U.S. Department of Transportation</p> <p>EDF = Engineering Design File</p> <p>HEPA = high-efficiency particulate air</p> <p>HWMA = Hazardous Waste Management Act</p> <p>IDAPA = Idaho Administrative Procedures Act</p> <p>INEEL = Idaho National Engineering and Environmental Laboratory</p> <p>LDR = land disposal restriction</p> <p>MCP = management control procedure</p> <p>NA = not applicable</p> <p>NESHAP = National Emission Standards for Hazardous Air Pollutants</p> <p>OSWER = Office of Solid Waste and Emergency Response</p> <p>OU = operable unit</p> <p>PCB = polychlorinated biphenyl</p> <p>PGS = Packaging Glovebox System</p> <p>RCRA = Resource Conservation and Recovery Act</p> <p>RRWAC = INEEL reusable property, recyclable materials, and waste acceptance criteria</p> <p>TAP = toxic air pollutant</p> <p>TSCA = Toxic Substances Control Act</p> <p>WAC = waste acceptance criteria</p> <p>WGS = Waste Generator Services</p> <p>WIPP = Waste Isolation Pilot Plant</p>	

Appendix B

May 11, 2000, Meeting Minutes and OU 7-10 Material Handling Cell Applicable or Relevant and Appropriate Requirements Application—Alternatives Summary

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05/16/2000 02:02 PM

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cc: Clair N Fitch/CFITCH/CC01/INEEL/US@INEL, PIT 9/PIT9EM/CC01/INEEL/US@INEL, Leslie D Giles/GILELD/CC01/INEEL/US@INEL
Subject: OU7-10 Staged Interim Action Project, May 18, 2000 Agency Conference Call Agenda

OU7-10 Staged Interim Action Project
May 18, 2000 Agency Conference Call Agenda
Call in number (208) 526-5002 @ 0830 MT
Agenda

1. Stage I Status: Updated activity list review Probing schedule list 5.16.00.c
2. Stage I - Issue to resolve before Campaign 1
3. Stage II Status (Document Submittal and Review Status)
4. Documents to be issued in the next 30 days
 - Stage I extended probing schedule (6/1)
 - 90% EEF Design Package (incremental submittal) (5/19)
 - 90% CIS Design (incremental submittal) (5/19)
 - 90% DAMS Design (incremental submittal) (5/19)
 - 90% Storage Part II Design (incremental submittal) (5/19)
 - 90% Draft Interface Control Documents (incremental submittal) (5/19)
 - 90% System Design Documents (incremental submittal) (5/19)
 - RD/RA Work Plan (6/15)

Minutes of May 11, 2000 Agency Conference Call, 7:30AM MDT
OU 7-10 Staged Interim Action Project

I. Agenda

Stage I Status: Updated activity list review


Probing schedule list 5.9.00.d

2. Stage I - Issues to resolve before campaign 2
3. Stage II Status (Document Submittal and Review Status)
4. Stage II RA Work Plan sample documents - review of those documents to be sent by e-mail
5. WMF-628 Storage Building - flood plain issue

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6. Documents to be issued in the next 30 days

Stage I extended probing schedule (6/1)

Stage II 6-month look-ahead schedule (5/1)

- 90% EEF Design Package (incremental submittal) (5/19)
- 90% CIS Design (incremental submittal) (5/19)
- 90% DAMS Design (incremental submittal) (5/19)
- 90% Storage Part II Design (incremental submittal) (5/19)
- 90% Draft Interface Control Documents (incremental submittal) (5/19)
- 90% System Design Documents (incremental submittal) (5/19)
- Updated Fire Hazards Analysis (5/19)
- Updated Preliminary Safety Assessment (5/19)
- Updated Q-List (5/19)
- Updated PC List (5/19)
- Draft Final Field Sampling Plan (5/19)
- Revision 2 of SRD (5/19)
- Revision 3 of DRD-7 (5/19)
- Criticality Safety Evaluation (5/19)

7. (Ωαλκ-iv) Χοντινυατιον οφ ΜΗΧ ΑΡΑΡσ Δισχυσσιον

II. Attendees

<u>Attendee</u>	<u>Affiliation</u>	<u>E-mail</u>
Brian Edgerton	DOE-ID	edgerbtg@id.doe.gov
Wayne Pierre (via telecon)	EPA	pierre.wayne@epamail.epa.gov
Jim McHugh (via telecon)	EPA Support	jamchugh@ix.netcom.com
Vicki Rhoades (via telecon)	EPA Support	ttobin@gfnet.com
Dean Nygard (via telecon)	DEQ	
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John Schaffer	BBWI	schajm@inel.gov
Bob Montgomery	BBWI	rtm@inel.gov
Dave Wilkins	BBWI	dww@inel.gov

III. Meeting Minutes 5/11/00

1. Stage I Status

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McConnell discussed updated activity list, specifically noting DSE rotating jaw test status and MCP-2783 restart activity plans. RWMC SAD (Bright) may be invited to participate in future Wednesday PM call if site administrative delays appear likely to influence probing startup.

EPA noted interest in any options for compression or consolidation of planned probing campaigns in the interest of accelerating Stage II siting and go-ahead decisions.

2. Stage I - Issues to resolve before campaign 2

McConnell discussed two detailed logic diagrams (currently in BBWI internal review) that will guide tasking and resource planning through the expanded probing campaigns. Chart 1 will overlay Tri-Party path forward logic (as developed in April 18-20 meetings) on specific OU 7-10 activities.

BBWI action to provide probing campaign integration logic to Agencies within the next week.

(Tentative) BBWI action to host Tri-Party teleconference discussing detailed probing campaign integration logic on 5/12 at 11:00 am MDT.

Draft DOE letter outlining OU 7-10 path forward briefly discussed; to be included on agenda for 5/12 call if it is held.

EPA noted that if detailed plan implementing agreements obtained in April 18-20 Tri-Party meetings produces significant and unanticipated schedule or cost impacts, certain activities may need reconsideration.

Safety issues potentially affecting Probing Campaign 2 startup: R. Thomas developing needed data, some additional safety analysis may be required relative to zirconium and uranium sources which may be encountered.

EPA queried status of OU 7-10 probing data incorporation into ER GIS display software; work continuing in this area.

BBWI action to provide GIS implementation schedule to Agencies or incorporate this schedule into probing campaign integration logic chart(s).

3. Stage II Status

All June deliverable products remain on schedule.

4 remaining design packages on track for May 19 submittal.

Per EPA request, **BBWI action to provide copy of RD/RA Work Plan submittal to Rick Poeton, EPA (OU 7-13/14).**

OU 7-10 Project Management Plan (PMP) discussed; though never formally issued, a working copy has guided efforts to date. BBWI ER management has directed an ER-level PMP and corresponding project execution plans (PEPs) be generated by 30 September 2000. EPA and IDHW/DEQ agreed that review of PMP draft at this time would add little value.

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Tri-Party decision to not require inclusion of OU 7-10 PMP in RD/RA Work Plan submittal, instead summarizing development plan for ER PMP and OU 7-10 PEP in submittal letter.

4. Stage II RA Work Plan sample documents

Review and discussion of Annotated RD/RA Work Plan outline:

BBWI action to include long lead procurement rationale in RAWP section 8.3.

Section 1.6 discussion of Stage II location will be consistent with 90% design package assumptions.

BBWI action to include updated discussion of how Stage II siting logic may change in RAWP submittal letter (i.e., acknowledge that Stage II location has not been confirmed as suitable by Tri-Parties).

Per EPA request, BBWI action to provide RD/RA Work Plan Packages with D-size drawings to Rhoades, McHugh.

The planned for Stage II Cost Estimate cross-walk summary will reflect changes to date based on approved Changes Requests and other scope changes to the Project.

BBWI action to address growth from last ESD in estimated project cost using Net Present Value (NPV) comparison utilizing a 7% growth rate.

EPA action to e-mail or otherwise provide reference as to EPA guidance/directive relating to use of 7% growth rate for CERCLA NPV analyses.

Section 1.8 discussion of community relations plan; EPA queried whether update of plan is required with each RD. DOE-ID responded that an updated fact sheet (likely 3-5 pages) will be developed.

Tri-Party decision that updated OU 7-10 SIAP fact sheet will suffice to update community relations plan associated with Stage II RD submittal.

DOE-ID action to provide updated OU 7-10 SIAP fact sheet for inclusion in RD / RA Work Plan.

Discussion of document review cycles, and Agency (IDHW/DEQ and EPA) agreement that Stage II schedule should reflect likelihood of FFA/CO 20 day supplemental review period being invoked by one or both Agencies.

It was further noted that FFA/CO "days" are calendar days.

Also, due to the expected large volume of comments expected to be received on the document, **Decision that DOE will also be exercising an additional 20 days to the 45 days (i.e., 65 calendar days) to resolve RD/RA Work Plan comments.**

Review and discussion of Sample (MHC Loadout) Annotated Procedure Outline:

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Intent is that all procedures will be of comparable maturity. Not intended that first phase submittal of O&M procedures will include all details, but those sufficient to describe transition of facility through all operating modes supported by 90% design.

BBWI action to separately identify secondary waste procedure(s) to be utilized in Stage II waste handling (may be reference to existing INEEL procedures).

BBWI action to provide Agencies with digital versions of as many referenced INEEL Management Control Procedures (MCPs) as is possible to facilitate RD/RA Work Plan reviews.

Summary: Tri-Party agreement that MHC draft operating procedure annotated outline format and general content of planned RA Work Plan submittal, as discussed in this conference, are sufficient and suitable for use in preparation of a complete RD/RA Work Plan submittal.

5. WMF-628 Storage Building - flood plain issue

Brief discussion and **Tri-Party decision to abandon idea of OU 7-10 utilizing WMF-628 storage facility as it will not meet all of the project needs (e.g., PCB storage) and it will not provide a significant cost savings.**

6. Documents to be issued in the next 30 days

As noted.

7. (Walk-in) Continuation of MHC ARARs Discussion

Continuation of discussion from last week, with supplemental information provided by BBWI via e-mail.

Tri-Party Decision: Based on the waste handling processes to be used during Stage II and the four proposed options discussed, Option 1a (i.e., applying select provisions of 40 CFR 264 Subpart I to the ITM and operations trays as relevant and appropriate requirements) was determined to be the appropriate option to be used in applying ARARs to MHC processes.

If minor modifications to the design become necessary that produce associated changes to MHC processes, the issue of applicable ARARs will be again looked at to ensure the appropriate ones are being applied and implemented.

IV. Actions

BBWI action to provide probing campaign integration logic to Agencies within the next week.

(Tentative) BBWI action to host Tri-Party teleconference discussing detailed probing campaign integration logic on 5/12 at 11:00 am MDT.

BBWI action to provide GIS implementation schedule to Agencies or incorporate

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this schedule into probing campaign integration logic chart(s).

BBWI action to provide copy of RD/RA Work Plan submittal to Rick Poeton, EPA (OU 7-13/14).

BBWI action to include long lead procurement rationale in section 8.3 of RAWP.

BBWI action to include updated discussion of how Stage II siting logic may change in RAWP submittal letter (i.e., acknowledge that Stage II location has not been confirmed as suitable by Tri-Parties).

BBWI action to provide RD/RA Work Plan Packages with D-size drawings to Rhoades, McHugh.

BBWI action to address growth from last ESD in estimated project cost using Net Present Value (NPV) comparison utilizing a 7% growth rate.

EPA action to e-mail or otherwise provide reference as to EPA guidance/directive relating to use of 7% growth rate for CERCLA NPV analyses.

DOE-ID action to provide updated OU 7-10 SIAP fact sheet for inclusion in RD / RA Work Plan.

BBWI action to separately identify secondary waste procedure(s) to be utilized in Stage II waste handling (may be reference to existing INEEL procedures).

BBWI action to provide Agencies with digital versions of as many referenced INEEL Management Control Procedures (MCPs) as is possible to facilitate RD/RA Work Plan reviews.

V. Issues

None

VI. Decisions

Tri-Party decision to not require inclusion of OU 7-10 PMP in RD/RA Work Plan submittal, instead summarizing development plan for ER PMP and OU 7-10 PEP in submittal letter.

Tri-Party decision that updated OU 7-10 SIAP fact sheet will suffice to update community relations plan associated with Stage II RD submittal.

Agency (IDHW/DEQ and EPA) agreement that Stage II schedule should reflect likelihood of FFA/CO 20 day supplemental review period being invoked by one or both Agencies.

Decision that DOE will also be exercising an additional 20 days to the 45 days (i.e., 65 calendar days) to resolve RD/RA Work Plan comments.

Tri-Party agreement that draft operating procedure annotated outline format and general content of planned RA Work Plan submittal, as discussed in this conference, are sufficient and suitable for use in preparation of a complete RD/RA Work Plan

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submittal.

Tri-Party decision to abandon idea of OU 7-10 utilizing WMF-628 storage facility as it will not meet all of the project needs (e.g., PCB storage) and it will not provide a significant cost savings.

Tri-Party decision that, based on the waste handling processes to be used during Stage II and the four proposed options discussed (summary file to be attached to minutes), Option 1a was determined by the Tri-Parties to be the appropriate option used in applying ARARs to MHC processes.

MHC-araroptions2.doc

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	ACTIONS	COMMENTS
1.	Configure drill for probing	After transfer to CTP - 1 EO (forklift)
2.	Complete planning per MCP-2783, restart of field activities following "routine shutdown" (Routine Shutdown >2 mo. Table A-1, App A.)	a) Operational Safety Board approved approach on May 10 b) Met with Site Area Director on May 11; 5/16 SAD requests demonstration of probing c) DOE-ID briefed May 12 d) Anticipate a level 2 RA e) Drafting Plan of Action; ETC is 5/19
3.	Transport Rig—RWMC -Schedule RWMC Resources	1 EO (lowboy trailer)
4.	Offload drill rig to location within crane range. -Schedule RWMC resources	Move to CTP to support startup process; 2 Eos, 1 HEO (crane)
5.	Install Geo-Fab for probes within crane reach	Material and staples at project site
6.	Reconfigure work zones based on new probe locations	
7.	DAR TPR-1760 to remove dust hood and make other minor changes	Retain existing system as approved; to delete would require extensive work
8.	Calibrate RADCON Instruments	Work in progress -- to be complete by June 8
9.	Train drill crew to revised TPR-1760	Tabletop and dry run at Pit 9 project site
10.	Form strategy for sequence of probe installation	In progress
11.	NW Contract-T. Sherwood ~ Logging FTL—Alt Probing	Tag on to OU7-13/14 contract
12.	New WMNW contract (sole source)	New scope drafted to procurement next week.
13.	DAR drill rig op. Manual (new fittings/hoses/gauges)	Engineering to determine ECF requirements
14.	Schedule new probe hole activities at RWMC POD -RWMC resource request (RCT/EO)	Contact: Galen Broer, 1 week lead time
15.	Complete start-up documentation; receive approvals	
16.	Execute start-up process	
17.	Probe Installation -RWMC Resources—crane, loader, RCT	Lead time to schedule resources and must have TBAs for RCTs. Need to have better dates on all the above to schedule.
18.	If >100 ft to support drilling trailer, move trailer on pit.	Move trailer on to Pit 9, reconnect lines

	ACTIONS	COMMENTS
1.	Complete tests of DSE rotating Jaw assembly	Complete – transfer Drill Rig to CTP next week.
2.	Identify new probe locations	Complete
3.	Verify compatibility with current Stage II siting	Complete
4.	Survey new probe locations	Complete – for 8 probe holes

OU 7-10 MATERIAL HANDLING CELL (MHC) ARARS APPLICATION – ALTERNATIVES SUMMARY

This document presents a number of alternatives for application of potential Applicable or Relevant and Appropriate Requirements (ARARs) to the OU 7-10 Stage II MHC. The purpose of the document is to illustrate several optional ARARs application strategies associated with the MHC for discussion with the agencies. The objective of the discussions is to reach agreement with the regulatory agencies as to the ARARs application approach that best achieves compliance.

The MHC consists of two gloveboxes attached to the OU 7-10 retrieval area enclosure (RAE) in which materials from Pit 9 are received, examined, sampled, and repackaged. The materials are initially retrieved in the RAE using a combination of the Retrieval Excavation System (RES) and a Remotely Operated Crane System (ROCS). Materials are placed in the Integrated Transfer Module (ITM) via the digface crane after which the ITM is loaded into the MHC glovebox for handling.

As shown in EDF-ER-109, the actual material handling and sampling operations in the MHC are planned to occur within the ITM and operation trays that are located on the glovebox floor. Some material handling activities may not be possible to perform within the confines of the ITM or operations trays. In this case the operations would occur directly on the glovebox floor or could be performed on a portable “tray” located on the glovebox floor but of larger size than an ITM. The current design does not include such a portable tray.

Appropriate application of ARARs to the MHC has proven difficult for several reasons including the unique nature of the operation (i.e., operation doesn’t dovetail with specific scenarios intended to be covered by the regulations) and the inherent uncertainty associated with the waste forms requiring handling in the MHC. An operations procedure is currently being drafted which is designed to bound the range of potential operations scenarios occurring in the MHC. With these limitations in mind, the discussions presented on the following pages were prepared to highlight several potential ARARs approaches and the associated limitations as well as design and operational considerations. The ARARs approaches summarized on subsequent pages include:

- Approach 1—Designate the ITM and any other portable trays in which MHC material handling operations occur as containers and manage the containers in accordance with the provisions of Subpart I as applicable requirements.
- Approach 1a—Designate selected provisions of Subpart I as relevant and appropriate requirements under which the ITM and any other portable trays would be managed.
- Approach 2—Designate the ITM and any other portable trays in which MHC material handling operations occur as miscellaneous units and manage the units in accordance with the “appropriate” provisions of Subpart I.
- Approach 3—Designate the MHC as a miscellaneous unit and implement appropriate substantive provisions of Subpart J, including secondary containment and daily inspections.

Approach 1—Designate the ITM and any other portable trays in which material handling operations occur as containers and manage the containers in accordance with the provisions of Subpart I as applicable requirements.

As the table below illustrates, strict application of the Subpart I provisions to the ITM and other portable trays raises several issues:

1. The current design does not support closure of the ITM and trays as required by 264.173;
2. Incompatible wastes may be placed within the ITM and trays before the MHC compatibility testing step.

Approach 1 is based on a strict application of the container definition in 40 CFR 260.10, which follows:

“Container” – means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Requirement	Implementation/comments
264.171 Condition of containers	Implementable
264.172 Compatibility of waste with containers	Implementable
264.173 Management of containers	264.173 (a) is not implementable. Current design does not support closure of ITM or operations trays. 264.173 (b) is implementable.
264.174 Inspections	Implementable
264.175 Containment	MHC provides compliant containment
264.176 Special requirements for ignitable wastes	Implementable
264.177 Special requirements for incompatible wastes	Compatibility testing occurs in the MHC inside of the ITM and operations trays supportive of avoiding final containerization of incompatible wastes.
264.178 Closure	Implementable

Approach 1a—Designate selected provisions of Subpart I as relevant and appropriate requirements under which the ITM and any other portable trays would be managed.

Approach 1a considers the fact that the ITM and portable trays, while potentially meeting a strict application of the 260.10 container definition, are not designed and operated to function as storage containers. Rather, the primary function of the ITM and operations trays is to convey materials into the MHC and provide a temporary operational platform or base for examination and characterization of Pit wastes. As such, the container provisions are not appropriately viewed as applicable, but certain relevant and appropriate provisions are appropriately applied to help ensure a protective remedial process. The Table below lists those provisions suggested as relevant and appropriate.

Requirement	Implementation/comments
264.171 Condition of containers	Considered relevant and appropriate and implementable
264.172 Compatibility of waste with containers	Considered relevant and appropriate and implementable
264.173 Management of containers	264.173(a) is not is not considered relevant and appropriate. No reasonable potential for release exists due to ITM location within the MHC glovebox. 264.173 (b) is implementable.
264.174 Inspections	Considered relevant and appropriate and implementable
264.175 Containment	Considered relevant and appropriate and implementable. MHC provides compliant containment. To address scenarios where a drum cannot be managed within an ITM, a larger, portable operations tray can be located in the MHC.
264.176 Special requirements for ignitable wastes	Considered relevant and appropriate and implementable.
264.177 Special requirements for incompatible wastes	Not implementable. Not considered appropriate. MHC characterization will ensure wastes placed in containers and sent to storage are compatible.
264.178 Closure	Considered relevant and appropriate and implementable.

Approach 2—Designate the ITM and any other portable trays in which material handling operations occur as miscellaneous units and manage the units in accordance with the “appropriate” provisions of Subpart I.

The rationale associated with approach 2 is similar to that of approach 1a. That is, because the ITM and any operations trays are not designed and operated to function as containers, strict application of container requirements may not be appropriate or achievable. Thus, designation of the ITM and operations trays as miscellaneous units may be more appropriate. Approach 2 would then involve application of the “appropriate” provisions of Subpart I to the units in order to ensure a protective remedial approach. The following table identifies the provisions of Subpart I that are considered appropriate. It is noted that the same requirements have been suggested for Approach 2 as for Approach 1a.

Requirement	Implementation/comments
264.171 Condition of containers	Considered appropriate and implementable
264.172 Compatibility of waste with containers	Considered appropriate and implementable
264.173 Management of containers	264.173(a) is not considered appropriate. No reasonable potential for release exists due to ITM location within the MHC glovebox and MHC operation. 264.173 (b) is implementable.
264.174 Inspections	Considered appropriate and implementable
264.175 Containment	Considered appropriate and implementable. MHC provides compliant containment. To address scenarios where a drum cannot be managed within an ITM, a larger, portable operations tray can be located in the MHC.
264.176 Special requirements for ignitable wastes	Considered appropriate and implementable.
264.177 Special requirements for incompatible wastes	Not implementable. Not considered appropriate. MHC characterization will ensure wastes placed in containers and sent to storage are compatible.
264.178 Closure	Considered appropriate and implementable.

Approach 3—Designate the MHC as a miscellaneous unit and implement appropriate substantive provisions of Subpart J, including secondary containment and daily inspections.

Approach 3 is associated with MHC operational activities that include treatment on the MHC floor. Based on this assumed operational scenario, it is concluded that the MHC itself is appropriately managed as a miscellaneous unit under Subpart X. The miscellaneous unit requirements at 264.601 also indicate that permit terms and provisions include design, operational, monitoring or other requirements from Subparts I through O and Subparts AA through CC of Part 264 as are appropriate for the miscellaneous unit (i.e., to ensure protection of human health and the environment). The following table shows the suggested citations from 40 CFR 264 Subpart J that are viewed as appropriate provisions to MHC management.

Requirements ^a	Implementation/comments
264.192 Design and installation of new tank systems or components	Implementable
264.193 Containment and detection of releases	Implementable, but not included in current design. Major design change.
264.194 General operating requirements	Implementable. Operational practices (batch process) prevent overfill etc.
264.195 Inspections	Implementable
264.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems	Implementable
264.197 Closure and post-closure care	Implementable
264.198 Special requirements for ignitable or reactive wastes	Not implementable. Not considered appropriate due to planned MHC compatibility testing.
264.199 Special requirements for incompatible wastes	Not implementable. Not considered appropriate due to planned MHC compatibility testing.

a. ARARS identified at the subsection level for convenience. Finer specification of provisions in subsections may be required if Approach 3 is implemented (e.g., to eliminate administrative requirements found in a given subsection).